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ABSTRACT

This third revision of the Classification of Instructional Programs (CIP) updates and modifies education program classifications, descriptions, and titles at the secondary, postsecondary, and adult education levels. This edition has also been adopted by Canada as its standard for major field of study classification. The volume includes the following sections: (1) an introduction, with information on update processes and procedures, principles governing programs included in the CIP, how the volume is organized, proposed revisions, textual conventions, taxonomic information, and new programs added; (2) a listing of series, codes, and titles; (3) full text of instructional program codes, titles, and definitions for the following classes of programs: academic and occupationally specific programs; vocational family and consumer sciences/consumer and home economics programs; technology education/industrial arts programs; U.S. Reserve Officer Training Corps programs; personal improvement and leisure programs; dental, medical, and veterinary residency programs; and high school/secondary diplomas and certificate programs. Appendix A is a French language section on codes used exclusively in Canada; Appendix B lists program codes and titles deleted in the years 2000, 1990, and 1985. (CH)

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CLASSIFICATION OF INSTRUCTIONAL PROGRAMS 2000

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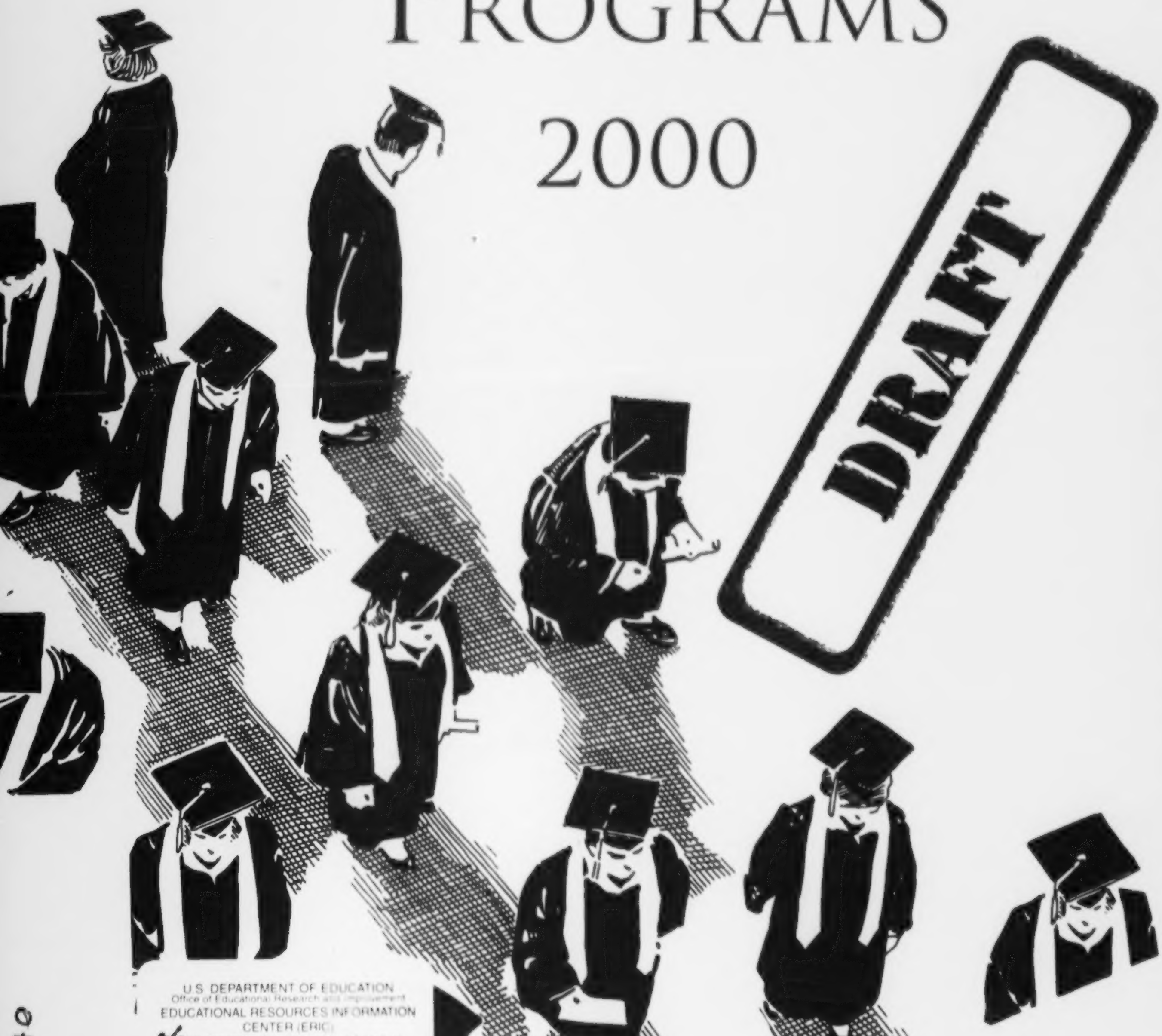

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Classification of Instructional Programs - 2000

-- Public Comment Draft --

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U.S. FOREWORD

The Classification of Instructional Programs (CIP) was originally developed by the U.S. Department of Education's National Center for Education Statistics (NCES) in 1980 and revised for the first time in 1985 and again in 1990. This publication represents the third revision and provides updates and needed modifications to education program classifications, descriptions and titles. The 2000 edition is the product of an extensive investment of time and work and reflects the considerable changes in educational programs that have occurred since the CIP was originally developed. Programs at the secondary, postsecondary, and adult education levels are covered in this volume. The CIP is used in all NCES surveys and is the accepted government statistical standard on programs used in education information surveys.

Since first published, CIP has been used by NCES in the Integrated Postsecondary Education Data System (IPEDS) and its predecessor, the Higher Education General Information Survey (HEGIS); as well as in the Vocational Education Data System (VEDS). CIP is also used by other components of the Department of Education, such as the Office for Civil Rights, the Office of Vocational and Adult Education, and the Office of Special Education. The CIP serves as the data standard on instructional programs for other federal agencies, including the National Occupational Information Coordinating Committee (NOICC), the National Science Foundation and the National Academy of Sciences, the Departments of Commerce (Bureau of the Census) and Labor (Bureau of Labor Statistics), and others. CIP is also used by state agencies and national associations as a basis for collecting and reporting instructional program data.

Revisions to a nationwide coding scheme such as CIP require that users of these codes be given ample time and assistance to implement the codes within their own databases and reporting systems. Consequently, the NCES does not plan to implement the new CIP until IPEDS 2003 for the collection of program completion data by field of study for the prior academic year (2002-2003).

CANADIAN FOREWORD

The Classification of Instructional Programs (CIP), 2000 Edition, has been adopted as Statistics Canada's standard for major field of study classification. As the new standard, the CIP will be phased in to replace Statistics Canada's University Student Information System (USIS), Community College Student Information System (CCSIS) and the Canadian Census major field of study classification. Transition from the USIS, CCSIS, and Canadian Census codes to CIP -- 2000 begins in July, 1999 with the implementation of the post-secondary Enhanced Student Information System (ESIS) by the Canadian Centre for Education Statistics (CES).

Adoption of the CIP by Statistics Canada followed a review of existing Statistics Canada field of study classification systems (USIS, CCSIS and Census) and a thorough examination of the 1990 edition of CIP. The decision to adopt the CIP was based on the comprehensiveness and detail of the CIP and the enhanced comparability with U.S. education data associated with its use. The CIP was therefore included within the Social Statistics Harmonization Initiative of Statistics Canada and subsequently approved by the Methods and Standards Committee as the new standard in March of 1998.

Consultations between the Centre for Education Statistics (CES), Canada and the U.S. National Center for Education Statistics (NCES) and National Library of Education (NLE) have resulted in the inclusion of Canadian content within the 2000 edition of the CIP. The use of the CIP by both Canada and the U.S.A. marks the beginning of more comparable data between the two countries and new opportunities to learn from each other toward ongoing improvements in the CIP.

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INTRODUCTION

The *Classification of Instructional Programs (CIP) 2000* is the third revision of the U.S. Department of Education's standard educational program classification system. It has also been adopted as the major field of study program classification standard for Canadian data collected and published by Statistics Canada.

This *Introduction* serves as a guide for reviewing and commenting on the draft version of CIP-2000. Following the public comment period, the draft will be revised and a final version will be prepared for publication. NCES and the authors will make every effort to incorporate suggested changes to the CIP, but reserve the right to make final determinations on its content in the best interest of data quality and consistency.

NCES is presenting this document as a working draft that is intended to solicit input from professionals in various academic, professional, and occupational fields. Programs that are not currently active are not included in this draft. We are seeking comments and input on the appropriateness of the program titles and descriptions contained within this updated version of the CIP and are particularly interested in receiving information on evolving programs that will meet the requirements for coding degrees during the school year 2002-2003 for reporting in the Fall of 2003. The methods, processes, and technical conventions used to develop the update are provided in the sections below. Please read these sections before commenting on the document.

The CIP-2000 Update (Processes and Procedures)

NCES examined a wide range of government and private data resources on educational programs in the preparation of this update. Files of postsecondary institutional catalogs and course listings were analyzed, as were commercial databases and the published lists of approved programs. NCES also analyzed its own and other organizations' data files to determine the viability of current program titles and descriptions. In addition to IPEDS, the National Longitudinal Study Postsecondary Transcript Data File, databases sponsored by the National Occupational Information Coordinating Committee (NOICC), the NSF/NAS Survey of Earned Doctorates, the Dictionary of Occupational Titles of the Department of Labor, the Standard Occupational Classification System of the Department of Commerce, and various databases and publications of the Bureau of Labor Statistics and the Bureau of the Census, were analyzed.

The changes proposed as a result of this process include:

- Deletions of codes;
- Additions of new codes and chapters;
- Program title and/or description changes; and
- Limited reorganization within Series, including the repositioning of some codes.

What is the CIP? CIP is a taxonomic coding scheme of educational instructional program data of all levels and types, using the definition of a program described below. Essential taxonomic principles of comprehensiveness, mutual exclusivity of elements, logical consistency, communicability and parsimony have guided NCES in developing and refining the CIP system since its inception. The CIP is intended to reflect the manner in which instructional program data are organized, collected and reported, using categories that can capture the vast majority of reportable program completion activity. Therefore, CIP titles and program descriptions are intended to represent discrete categories into which appropriate data can be placed, not to be exact duplicates of specific titles of majors as used by individual institutions. CIP must be broadly accurate and provide reasonably identifiable coding locations, not reflect minor local variations.

CIP codes, with minor exceptions, do not reflect instructional program level distinctions. In most cases, educational programs are offered at various educational levels in the same field. The classifications must be able to be used to report program data at any level. Individual survey instruments often are designed to distinguish by level, but CIP is not.

CIP codes are standard statistical coding tools that reflect current practice, not a prescriptive list of all officially recognized or permitted programs. When codes are added or deleted, this change pinpoints differences in instructional program content that have occurred. No deleted code number is ever reassigned, and residual data are either deleted or redirected to another appropriate code by NCES.

The Purposes and Uses of the CIP. The CIP is intended to establish standard terminology to improve the communication and exchange of information on instructional programs and to standardize record-keeping. Among the intended users of the CIP system, besides the federal government, are state governments, local governments, educational institutions, education research organizations, accrediting agencies, professional associations, and individual researchers.

Specifically, the CIP is designed to:

- assist in collecting, verifying, interpreting and reporting instructional program data;
- aid in designing instructional program data collection instruments;
- assist in educational planning, resource allocation and review through the use of standardized instructional program data categories; and
- aid those responsible for responding to instructional program data requests.

Principles Governing Instructional Programs Included in CIP

What is an Instructional Program? For purposes of the CIP, NCES defines an instructional program as follows:

> A combination of courses and experiences that is designed to accomplish a predetermined objective or set of allied objectives such as preparation for advanced study, qualification for an occupation or range of occupations, or simply the increase of knowledge and understanding. (Chismore and Hill, *A Classification of Educational Subject Matter*, NCES, 1978, p. 165)

Educational Programs Included in the CIP. Under this definition, instructional programs included in the CIP correspond to the following operational criteria:

1) An instructional program must be offered by, through, or under the auspices of an educational institution or other recognized provider.

2) The program must be comprised of more than an isolated course or learning experience or haphazard collection of related courses or experiences.

3) There must be a set of structured learning experiences, defined by an institution or other provider, leading to a completion point that is formally certified by an award or other form of recognition.

Instructional programs that meet the above criteria for inclusion in the CIP include:

- Postsecondary programs culminating in the following awards: Postsecondary Certificates for the completion of programs that are less than 1 academic year, at least 1 but less than 2 academic years or at least 2 but less than 4 academic years; Associate's Degrees; Bachelor's Degrees; Postbaccalaureate Certificates; Master's Degrees; Post-Master's Certificates; First-Professional Degrees; Education Specialist's Degrees (Ed.Sp.); Doctor's Degrees; and Post-Doctorate Certificates.

- Secondary programs culminating in the following awards: Regular/General High School Diplomas and Secondary/Senior High Graduation/Completion Diplomas/Certificates; College/University Preparatory and Advanced High School/Secondary School Diplomas; Vocational High School Diplomas; and Secondary/ Vocational/Industrial/Industrial.

- Diplomas; Honors/Regents High School Diplomas and Provincial Graduation Certificates; High School/Secondary Equivalence Certificates, and Adult Secondary School Diplomas; Certificates of Competence and Provincial Certificates of Education; Certificates of IEP Completion; and Certificates for Home-schooled Instruction.

- Secondary and postsecondary Cadet and Junior/Senior R.O.T.C. programs.

- Adult education programs leading to certificates of completion

- Residency programs conducted by the dental, medical, and veterinary professions that lead to advanced professional certification, including specific training offered by the U.S. Military in programs parallel to civilian instructional programs.

Education Programs Not Eligible for Inclusion in CIP. CIP is a coding guide designed to assist in the collection of data on educational programs only. The following programs are, therefore, not included in the CIP:

- In-house, professional, or on-the-job training activities and programs that are not recognized by an educational institution or provider and that do not lead to any kind of transferable credit or certification;

- Double majors or multiple majors are excluded because each major is treated as an independent entity and should be reported separately; and

- Subject matter specialization within a program field are not included because they are not treated as a major and are not recognized by the institution as a formal program offering. Program minors and research specializations are also excluded because they do not constitute degree programs. For example, A "Liberal Arts" major might take the majority of his/her course work in History; that student would be classified under Liberal Arts, not History even though the student may have completed numerous credit hours in that minor.

Decision Rules for the Retention or Addition of Programs to the CIP. An instructional program that meets the definitional criteria stated above is eligible for inclusion in CIP. To determine whether an eligible program is retained or added, the following decision rules are used:

- Federal survey data showing that at least 30 completions have been reported over a three-year period in at least 10 postsecondary institutions in three or more states (e.g., from surveys such as IPEDS or the Survey of Earned Doctorates conducted by the National Science Foundation).

- Written requests for new codes provided via federal education surveys and meeting the threshold criterion above;

- Evidence, including testimony, of authorities in a field who state, and provide evidence to show, that a new program exists and is offered; and/or

- Empirical evidence of program viability based on the authors' review of primary sources and related data bases at both the secondary and postsecondary levels.

Decision Rules for Deleting Programs from the CIP. Likewise, program codes may be deleted from use in the current edition of CIP for reasons that include:

- Federal survey data showing that fewer than 30 completions were recorded over a three-year period, in less than 10 postsecondary institutions and spread across fewer than three states;

- Evidence, including testimony, from authorities in a field who state, and provide evidence to show, that a program is or will be no longer offered or recognized; and/or

- Empirical evidence that a program is not in fact offered, based on the authors' review of primary sources and data bases at both the secondary and postsecondary levels.

Organization of the CIP-2000

The CIP-2000 is divided into eight chapters with each containing Series and codes that need to be distinguished from the others. The chapters contain the following types of instructional programs:

> *Chapter One* - Academic and Occupationally-Specific Instructional Programs offered for regular credit at one or more postsecondary educational levels, including programs which result in recognized completion points and awards such as degrees, diplomas, certificates and other formal awards.
>
> *Chapter Two* - Family and Consumer Science/Consumer and Home Economics Programs offered for credit in secondary schools and certain postsecondary situations that may or may not lead to regular completions or award certifications.
>
> *Clarifying Note*: The instructional programs included in Series 20.01 of Chapter Two have been confused with Home Economics programs listed in Series 19. and 20. in Chapter One. The 20.01 Series programs were historically called Non-Gainful Home Economics and do not directly prepare individuals for paid employment, rather for the primary role of homemaker.
>
> *Chapter Three* - Technology Education Programs offered for credit in middle and secondary schools that may not lead to regular completions or award certifications. These programs have often been confused with teacher education programs in technology education at the postsecondary level and with Occupationally-Specific Programs that contain the word "technology" or "technician" in their titles.
>
> *Chapter Four* - Reserve Officer Training Corps (R.O.T.C.) Programs offered for limited regular credit and leading to professionally recognized completions, but do not currently lead to academic awards or completions.
>
> *Chapter Five* - Personal Improvement and Leisure-Time Activity Programs that are not typically offered for academic credit, but that may receive some form of recognition and may lead to a completion award.
>
> *Chapter Six* - Residency Programs in various dental, medical, and veterinary specializations offered in teaching hospitals and similar locations, that may lead to advanced professional certification if board approval is sought and attained. These training programs have been confused with research degree programs with similar names in the clinical, biological, and agricultural sciences.
>
> *Chapter Seven* – Instructional Programs leading to general diplomas and certificates awarded at the secondary educational level only, and not corresponding to more specific instructional programs above. Occupationally-specific Programs are reported under the specific occupational code in which the student demonstrated occupational competency .
>
> *Chapter Eight* - Instructional Programs offered in French to Canadian residents and others for whom French is the first language, or to other students enrolled in schools, colleges, and universities in Canada which offer instruction in French.

Each chapter contains, in numerical order, the complete list of the 1990 CIP 6-digit codes pertaining to the topic of that chapter, arranged in 2-digit and 4-digit Series order. Users will note that the numerical sequences in Chapter One occasionally skip codes or Series numbers. This results from and reflects deletions of code numbers that appeared in prior editions of the CIP, and moves of several 2- and 4-digit Series and 6-digit codes to new locations or chapters.

Identifying Proposed Revisions to the CIP

Standard conventions were used to identify proposed changes for the CIP-2000. These conventions and their applications are delineated below.

Changes in Series or Code Numbers. Proposed changes in Series or code numbers are identified in two ways. Series or code numbers that have been added are identified by the use of bold italics (*Examples:* ***30.16, 02.0103, 05.0116***). Series or code numbers that are proposed for deletion are identified by the use of strikethroughs (*Examples*: ~~03.0405~~ or ~~08.0401~~).

Title and Definition Changes. Changes in code and Series titles and descriptions have been made to reflect changes in program terminology and instructional content at both the secondary and postsecondary levels, and to ensure internal logical and organizational consistency within the CIP. Changes to program titles are identified by the use of bold italics in the changed title (*Example 1*: ***South and Southeast Asian Studies,*** *Example 2:* **Communications, *Journalism and Related Fields, Other***). The first example indicates that a new program title has been added to the CIP (i.e., is a new program title); the second example indicates that a program title has been modified by expansion. Some of the added Series or code titles in this version appear without definitions. **These represent cases in which NCES is seeking input on program definition content and wording. Definitions for programs that are new, evolving, or undergoing changes in content or scope are particularly needed.**

Program titles and definitions that are no longer appropriate are identified by use of strikethroughs, indicating that the title or definition has been proposed for deletion from CIP-2000 (*Example:* ~~14.1601~~ [~~**Geophysical Engineering**~~]. ~~An instructional program that prepares individuals to apply mathematical, geophysical and planetary principles to the analysis and evaluation of engineering problems, including gravitational and magnetic forces, time and space factors, celestial mass and motion, and their relation to questions of control, movement, function and design in earthbound and space systems~~.

Textual Conventions

Standard formats are used in each chapter to indicate the type of information conveyed by an entry. These formats pertain to Series organization, instructional program descriptions, cross-references, moves, deletions with crosswalks, and straight deletions. Each is discussed below.

Two-Digit Series. Every CIP entry is aggregated into a specific 2-digit Series that is indicated by a 2-digit number followed by a period (*Examples*: 01., 02., 05., 51., etc.). The 2-digit Series represent logical groupings of related and comparable programs. All 2-digit Series titles are printed in **boldface type** and appear in all **CAPITAL LETTERS**. Every 2-digit Series definition begins with the standard phrase "A summary of groups of instructional programs" followed by a general description of the subject areas and proficiencies that are associated with the instructional programs within that Series. The organization of these 2-digit Series is based on long-standing historical statistical convention and is modified rarely to ensure time-series compatibility.

Four-Digit Series. Within each 2-digit Series there is an intermediate aggregation of programs known as a 4-digit Series. This 4-digit Series summarizes the groups of instructional program(s) that comprise the 4-digit Series. There is at least one 4-digit Series within each 2-digit group. The numbering sequence for the 4-digit Series consists of the associated 2-digit Series number followed by a period and an assigned 2-digit number that is uniquely associated with that 4-digit Series (*Examples*: 02.01, 02.02, 02.99). Program titles at this level are printed in **boldface type** in **Initial Capitals**. The descriptive text (or program summary definition) generally begins with the standard phrase "(See the xx.xxxx – the 6-digit code contained within the 4-digit Series that refers the reader to the definition used at the 6-digit code level). This indicates that the 4- and 6-digit definitions are identical or that the general 6-digit definition is identical. In other cases, a definition for the 4-digit program group is provided by use of the phrase "A group of instructional programs..." followed by a description of the instructional content of the programs within that Series.

Six-Digit Codes. Every 6-digit code represents a single instructional program. The 6-digit code is the most detailed unit of analysis used by NCES, institutions, and schools to track and report program completions, degrees conferred and other fields of study outcomes. There is at least one 6-digit code within every 4-digit Series. The standard format for the 6-digit codes is xx.xxxx (*Examples*: 01.0101, 02.0101, 16.0501). The numbering sequence is similar to the 4-digit Series sequence, with two more digits added after the 4-digit Series number. The additions represent the numbers assigned to that specific 4-digit Series.

Program titles, at the 6-digit code level, are identified in **boldface type** in **Initial Capitals** and correspond to titles of programs currently used by educational institutions and other education providers. CIP-2000 lists updated titles for those programs that are currently provided and recognized by schools and institutions. Minor differences may appear, therefore, between titles of codes in this version and the 1990 version of the CIP. As indicated previously, all proposed title changes are presented in ***bold italics***.

If a 1990 CIP definition is proposed for modification, that part of the definition proposed for deletion or substitution is ~~struckthrough~~. The new or modified definition is presented in ***bold italics***. **Should no pubic comments be received, then the struckthrough title or definition will be deleted and the title or definition (language) in bold italics will be incorporated into the final version of the CIP-2000.**

Briefly summarized, there are several other textual conventions within the CIP that are associated with program and Series titles and descriptions, as follows:

- Multiple titles separated by slashes ("/") indicate that two or more interchangeable titles are in use for this program. In such cases, the most commonly used title appears first, followed by titles less frequently used. (*Example*: 43.0103 **Criminal Justice/Law Enforcement Administration**.)
- The phrase "An instructional program that prepares individuals for...", or the phrase " generally prepares individuals" within the description indicates that the program objectives are designed to prepare individuals for "occupationally-specific employment" upon completion.

- Program descriptions for academic or general programs generally begin with the phrase "An instructional program that describes...". In contrast to the occupationally-specific programs, these programs have no specific objectives to provide occupational preparation.

- When a 6-digit program description contains a second sentence or clause that begins with "Includes instruction in..." or "including...such as...", this is a description of the topics covered by the program. These topical subject matter listings are intended merely as a guide to general areas included in that instructional program. Programs offered at different levels may cover more or fewer topics than those listed.

Cross-references. Cross-references are unnumbered entries that refer the user to related codes located elsewhere within the CIP. Within the text, these references are indicated by the use of 6 dashes (------) in the spaces normally occupied by the 6-digit program code. They are located directly below the Series or program that is referred to. A single program or Series may have references at multiple levels of specificity, that is a 6-digit program may have references that are either at the 6-digit code or 4-digit or 2-digit Series level. Cross references contain the precise title of the referenced Series or program followed by " (*Refer to*...)" and the specific numerical code associated with the reference (*Example:* ------ **Business Administration and Management.** (Refer to 52.02 Series). These references are provided in instances that require the data provider to make distinctions between potentially similar programs. Reviewers of the CIP are encouraged to read all of the program titles and definitions within a given 2- or 4-digit Series before making classification decisions.

Moves. Moves indicate that a code or Series that occupied a location in the 1990 CIP is proposed for movement to a new location within CIP-2000. The number, title, and definition are struckthrough and the title is bracketed. After the definition, a parenthetical statement "(Moved to...)" is indicated and notes the precise location that the code or Series is proposed to occupy in the final edition of CIP (*Example*: ~~13.08 [**Educational Psychology.**]~~ (Moved to 42.18). Multiple sources were consulted before Series or program location changes *(i.e., Moves*) were made.

Crosswalked/Deletions. If a 1990 code or Series has been deleted as a separate entry and now combined with another code or Series that continues to exist, the user will be alerted by a "(Deleted, included under)" notation with the title bracketed and code number, title and definition struckthrough. (*Example*: ~~03.0405 [**Logging/Timber Harvesting.**]. An instructional program that prepares....~~(Deleted, included under 03.0499).

Simple Deletions. If a code has been completely deleted since the development of the 1990 CIP, the user will find in its former location an entry that simply says deleted with no numerical reference (*Example:* ~~26.0499 [**Cell and Molecular Biology, Other**~~.] (Deleted)). Few "simple deletions" appear in this version of the CIP.

Program Overlap and Other Taxonomic Problems

Several programs within this CIP version contain overlapping content and other taxonomic problems. An identification of these programs and explanations to guide their use and reporting follow:

Marketing Programs. There is a significant degree of overlap in titles and content of the Marketing programs located in Series 08. **(Sales and Marketing Operations)** and those included in Series 52.14 (**Marketing Management and Research**) in Chapter One. This overlap has historically caused reporting problems. Series 08., now proposed to be called **Sales and Marketing Operations**, was formerly called "Marketing and Distribution", and has historically been known as "Distributive Education". The following programmatic differences exist between the two Series which define their proper use and applicability: programs in Series 08. are instructional programs offered primarily at the secondary school level, whereas programs in Series 52.14 are taught primarily at the collegiate level and focus on a wider range of marketing applications and marketing research. NCES received input that recommended moving these Series 08. programs to Series 52. as a separate 4-digit Series (i.e., from Series 08. to Series 52.XX).

Computer-Related Programs. Series 11. **(Computer and Information Sciences)** and Series 52.12 (**Management Information Systems and Business Data Processing**) overlap in program focus and subject matter. The differences between the two follow: 1) Series 11. focuses on computer and information science programs that have general applicability and are commonly taught in computer science departments and divisions; 2) Series 52.12, by contrast, is intended to cover instructional programs in computer applications and/or computer-related programs offered in business departments and schools of business. The codes in Series 52.12 should only be used for instructional programs directly related to business applications within business programs. All other computer science-related instruction should be reported in Series 11. Computer-related instructional programs in Engineering, Engineering Technology, and various maintenance/installation/repair fields should appropriately be reported in Series 14., 15., and 47. NCES is seeking input on the best strategy to handle this mutual exclusivity problem.

Home Economics and Vocational Family and Consumer Sciences Programs. In the mid-eighties, NCES isolated a major reporting problem within the **Collegiate Family and Consumer Sciences** program area in Series 19. of Chapter One (formerly known as Home Economics), and the **Vocational Family and Consumer Sciences**, formerly classified as **Vocational Home Economics** in Series 20.01 of Chapter Two. There are current level distinctions between the two Series that support their separation. The distinctions are supported by the professional associations in these fields that continue to justify the distinctions in classification and reporting of programs in Series 19., 20. and 20.01. Some associations claim that college level enrollments and completions (B.S. and above) and some postsecondary degree or certificate programs in technical schools should only be reported in Series 19. There are, however, serious problems with the terminology at the collegiate level. Most institutions have not adopted the **Family and Consumer Science** terminology and many continue to use such terms as Human Science, Human Ecology, and others to replace **Home Economics**. Variations in the classification and recognition of these programs also exist across professional associations. The Council of Administrators of Family and Human Sciences and the Board of Human Sciences, for example, use different terms than other national associations.

Series 20. comprises two types of programs. Series 20.01 is traditionally offered at the elementary and secondary levels to prepare individuals for the dual occupation of homemaker and volunteer/wage earner. Series 20.01 was historically referred to as "non-gainful home economics", and was moved to Chapter Two in the 1990 CIP revision. Completion or degree data should not be reported in Series 20.01 at any level because the "programs" have no specified completion point. The remainder of Series 20. is "occupationally-specific" with defined completion points offered at both the secondary and postsecondary levels. The highest degree for the Vocational Home Economics programs in Series 20. is the Associate of Arts or Sciences. No Bachelor's or Graduate degree (Master's, Doctor's) data should be reported under Series 20. Simply put, programs contained in Series 19. and 20. are in need of considerable attention. **SUGGESTIONS ARE WELCOME.**

Vocational Program Identification. Users of the CIP should be aware that the proposed CIP-2000 classification system does not attempt to make distinctions between "traditional vocational" and other types of programs, either occupationally-specific or academic. Vocational programs were distinguished in the 1990 CIP by placing an asterisk ("*") adjacent to the program to identify programs that had been eligible for federal Vocational Education Act (Perkins Act) funding. These programs were mandated to operate at the sub-baccalaureate level. Such distinctions are blurred since many vocational programs have evolved beyond the sub-baccalaureate level to the baccalaureate level (e.g., "**Dental Hygienist**"). Multiple Series in closely related areas, such as **Engineering** (Series 14.) and **Engineering Technology** (Series 15.), or **Agricultural Business and Production** (Series 01.) and **Agricultural Sciences** (Series 02.), no longer have level distinctions.

Appropriate Uses of Residency Codes. Chapter Six contains a list of codes relevant to currently recognized residency programs in dentistry, medicine, and veterinary medicine. In some cases, academic degrees may be awarded to individuals completing residency programs. These degrees are considered advanced degrees in dental, medical, or veterinary clinical science. If an individual obtains an academic degree (MS or Ph.D.) in a clinical science (residency) program, that data should be reported under the appropriate clinical science code in Series 51. of Chapter One, not Chapter VI. Completions of residency programs that do not result in academic degree awards should appropriately be reported under the residency codes in Chapter Six -- not under the codes in Chapter One.

Program Codes with Indicated Degree Levels. A few Series contain codes for which specific degree levels are indicated. These include 22.0101 Law (LLB, JD); 22.0104 Juridical Science/Legal Specialization (LLM, MCL, JSD/SJD); 39.0602 Divinity/Ministry (BD, MDiv); 39.0603 Rabbinical/Talmudic Studies (MHL, Rav); 51.0101 Chiropractic (DC, DCM); 51.0401 Dentistry (DDS, DMD); 51.0501 Dental Clinical Sciences/Graduate Dentistry (MS, Ph.D.); 51.1201 Allopathic Medicine (MD); 51.1401 Medical Clinical Sciences (MS, Ph.D.); 51.16 Series Nursing (R.N. Training, e.g., Diploma, A.S.N., B.S.N., MSN); Nursing (Post-RN); and Nursing (L.P.N. Training); 51.1701 Optometry (OD); 51.1901 Osteopathic Medicine (DO); 51.2001 Pharmacy (PharmD); 51.2101 Podiatry (DPM, DP, PodD); 51.2401 Veterinary Medicine (DVM); and 51.2501 Veterinary Clinical Sciences (MS, Ph.D.).

While by design, there are no level distinctions within the CIP, the above-listed codes are distinguished by degree level for the purpose of obtaining clean statistical counts on the licensed professional education programs that result in first-professional degrees. These degree programs are also identified to ensure that associated clinical research programs are not confused with first-professional programs.

Programs Added to CIP-2000

There are a number of new instructional programs and Series that appear to meet the criteria for CIP inclusion. NCES made every effort to incorporate titles and definitions that are currently and frequently used by educational providers and professional associations. **We recognize, however, that there are some new programs that were not identified -- the list is not exhaustive.** If you are aware of any such programs, we would be interested in hearing about their scope, content, titles, and the number of education providers, states in which the programs are offered and the number of completions for the programs.

NCES' methodology for new identifying programs for inclusion was to propose programs or Series where there was overwhelming evidence that a new instructional program or series of programs was evolving. To identify these programs, we assembled evidence of over one hundred programs that may possibly meet the operational criteria for inclusion. However, since these programs are new or evolving, it is possible that some of the titles and definitions are not as complete, concise, or appropriate as we would like them to be. Public comment and feedback on the titles and definitions of these programs is critically needed. Inconsistencies in the titles, descriptions or content of some new or evolving programs precluded their inclusion in the CIP.

Because NCES places such high priority on identifying and defining new and evolving programs, we have placed a list of these programs on the next page for your review and comment. The list of proposed additions is organized in numerical sequence by program code or series number. Program titles that are followed by an asterisk ("*") indicate that the program appears in the text without proposed definitions. Since a program cannot be added without a definition, we are asking that you either suggest an appropriate definition for these programs or recommend that the program not be added to the CIP-2000. Almost all programs that appeared in the 1990 version of the CIP are also in need of updated definitions and descriptions due to changes in technology and work organization. We ask that you provide updates for any program description, where needed.

Instructional Programs Proposed for Addition to CIP-2000
In Numerical Code Sequence

CIP Code Number	Instructional Program Title
Chapter I:	*Academic and Occupationally-Specific Programs*
02.0103	Agricultural Chemistry
03.0102	Environmental Science/~~Studies~~
03.0103	Environmental Studies
03.0204	Marine Resources Management
05.0116	South and Southeast Asian Studies
05.0208	Regional and Cultural Minority Studies
09.09	Digital Communications and Media
09.0901	Digital Communications and Media*
10.0105	Recording Arts Technology/Technician
13.1207	Montessori Teacher Education, Multiple Levels
13.1208	Waldorf/Steiner Teacher Education, Multiple Levels
13.1332	Geography Teacher Education
13.1402	Teaching French as a Second or Foreign Language
13.1502	Adult Literacy Tutor
14.0902	Computer Hardware Engineering *
14.0903	Computer Software Engineering *
14.0999	Computer Engineering, Other
14.17	Industrial/~~Manufacturing~~ Engineering
14.1701	Industrial/~~Manufacturing~~ Engineering*
14.30	Engineering/~~Industrial~~ Management
14.3001	Engineering/~~Industrial~~ Management
14.33	Construction Engineering
14.3301	Construction Engineering *
14.34	Forest Engineering
14.3401	Forest Engineering *
14.35	Manufacturing Engineering
14.3501	Manufacturing Engineering *

Instructional Programs Proposed for Addition to CIP–2000
In Numerical Code Sequence - continued

CIP Code Number	Instructional Program Title
14.36	Surveying Engineering
14.3601	Surveying Engineering *
15.0305	Telecommunications Technology/Technician *
15.0603	Industrial/~~Manufacturing~~ Technology/Technician*
15.0612	Manufacturing Engineering Technology/Technician *
15.0613	Industrial Management *
15.0703	Industrial Safety/Occupational Safety *
15.0704	Hazardous Materials Information Systems Technology/Technician *
15.0705	Industrial/Occupational Hygiene *
15.0904	Mining Technology/Technician
15.12	Computer Engineering Technologies/Technicians *
15.1201	Computer Engineering Technology/Technician, General *
15.1202	Computer Hardware Technology/Technician *
15.1203	Computer Software Technology/Technician *
15.1299	Computer Engineering Technologies/Technicians, Other
15.13	Drafting/Design Engineering Technologies/Technicians*
15.1301	Drafting/Design Engineering Technology/Technician, General *
15.1302	CAD/CAM Design Application Technology/Technician *
15.1399	Drafting/Design Engineering Technologies/Technicians, Other
15.14	Nuclear Engineering Technologies/Technicians *
15.1401	Nuclear Engineering Technology/Technician *
16.10	Native American/American Indian Languages and Literatures
16.1001	Native American/American Indian Languages and Literatures
16.13	Celtic Languages and Literatures
16.1301	Celtic Languages and Literatures
23.0702	American Literature (Canadian)
26.0304	Plant Genetics
26.0501	Microbiology/~~Bacteriology~~
26.0502	Bacteriology
26.0604	Developmental Biology/Embryology

Instructional Programs Proposed for Addition to CIP-2000
In Numerical Code Sequence - continued

CIP Code Number	Instructional Program Title
26.0703	Genetics, Human and Animal
27.0102	Algebra
27.0103	Analysis and Functional Analysis
27.0104	Geometry
27.0105	Logic
27.0106	Number Theory
27.0107	Topology
27.0303	Computing Theory *
30.16	Accounting and Computer Science
30.1601	Accounting and Computer Science
39.0605	Ordination, Other Than Divinity/Ministry and Rabbinical*
39.0606	Talmudic Studies, Pre-Rabbinical*
39.0701	Clinical Pastoral Counseling
39.0799	Pastoral Counseling and Specialized Ministries, Other
40.0402	Atmospheric Physics and Chemistry *
40.0403	Atmospheric Dynamics *
40.0404	Meteorology *
40.0499	Atmospheric Sciences and Meteorology, Other
40.0508	Nuclear Chemistry*
40.0605	Mineralogy and Petrology *
40.0606	Stratigraphy and Sedimentology *
40.0607	Geomorphology and Glacial Geology *
40.0704	Hydrology and Water Resources *
40.0705	Marine Sciences *
40.0811	Fluids *
40.0812	Polymer Physics *
41.04	Scientific Laboratory Technologies/Technicians *
41.0401	Scientific Laboratory Technology/Technician*
42.05	Comparative Psychology
42.0501	Comparative Psychology

Instructional Programs Proposed for Addition to CIP-2000
In Numerical Code Sequence - continued

CIP Code Number	Instructional Program Title
42.10	Personality Psychology
42.1001	Personality Psychology
42.13	Psychometrics
42.1301	Psychometrics
42.15	Quantitative Psychology
42.1501	Quantitative Psychology
42.18	Educational Psychology
42.1801	Educational Psychology
42.19	Marriage and Family Counseling
42.1901	Marriage and Family Counseling
45.0806	Asian History
45.0807	Canadian History
45.1003	Canadian Government and Politics
46.0402	Concrete Placing and Finishing
46.0404	Drywall Installer/Drywaller
46.0406	Glazier
46.0410	Roofer
46.0411	Well Driller
46.0412	Blaster
47.0110	Security System Installer and Repairer
47.0409	Parts and Warehousing Operations and Maintenance Technology/Technician
47.0612	Vehicle Emissions Inspection and Maintenance Technology/Technician
48.0509	Ironworker, Foundry Worker, and Blacksmith *
48.06	Precision Work, Assorted Materials
48.0605	Millwright *
48.0606	Boilermaker *
48.0699	Precision Work, Assorted Materials, Other
49.0102	Aircraft Pilot and Navigator, Fixed Wing
49.0108	Aircraft Pilot and Navigator, Rotary Wing

Instructional Programs Proposed for Addition to CIP-2000
In Numerical Code Sequence - continued

CIP Code Number	Instructional Program Title
49.0109	Flight Instructor, Fixed Wing
49.0110	Flight Instructor, Rotary Wing
49.0111	Specialist Pilot Ratings (e.g. Multi-Engine, Float, and IFR)
50.0607	Animation, Video Graphics and Special Effects
50.0910	Jazz Studies
50.0911	Music – Stringed Instrument Performance
50.0912	Music – Brass Instrument Performance
50.0913	Music – Woodwind Instrument Performance
50.0914	Music – Percussion Instrument Performance
51.0911	Electroneurophysiology Technology/Technician *
51.0912	Magnetic Resonance Imaging Technology/Technician *
51.1105	Pre-Nursing Studies
51.1616	Nursing Educator (Post R.N.) *
51.1617	Nursing, Clinical Specialist (Post R.N.) *
51.1618	Nursing, Critical Care (Post R.N.) *
51.1619	Nursing, Occupational Health (Post R.N.) *
51.1620	Nursing, Pre-Operative (Post R.N.) *
51.1621	Nursing, Gerontology (Post R.N.) *
51.2311	Massage Therapy/Therapeutic Massage *
51.2601	Institutional Health Aide
51.2603	Personal Care Attendant *
51.2699	Miscellaneous Health Aides, Other
51.2706	Traditional Healing Arts, Other than AOM
51.2799	Miscellaneous Health Sciences and Allied Health Services, Other
52.0413	Parts, Warehousing and Inventory Management Operations
52.0414	Traffic, Customs, and Transportation Clerk/Technician
Chapter V:	*Personal Improvement and Leisure Programs:*
32.0112	Second Language Learning
33.0105	Canadian Citizenship Education

Instructional Programs Proposed for Addition to CIP-2000
In Numerical Code Sequence - continued

CIP Code Number	Instructional Program Title
Chapter VI:	*Dental, Medical and Veterinary Residency Programs*:
51.2965	Adult Reconstructive Orthopedics (Orthopedic Surgery) *
51.2966	Chemical Pathology Residency *
51.2967	Child Neurology Residency *
51.2968	Cytopathology Residency *
51.2969	Diagnostic Laboratory Immunology Residency *
51.2970	Geriatric Medicine Residency (Internal Medicine) *
51.2971	Pediatrics Urology *
51.2972	Physical and Rehabilitation Medicine Residency *
51.2973	Preventive Medicine Residency – Public Health *
51.2974	Transitional Year Residency *
51.2975	Spinal Surgery Residency (Orthopedic Surgery) *

** Asterisks indicate that definitions need to be developed- suggestions are welcome. Programs cannot be added to the CIP without definitions.*

SERIES, CODES, AND TITLES LISTING

SERIES, CODES, AND TITLES LISTING CIP-2000

CHAPTER I: ACADEMIC AND OCCUPATIONALLY- SPECIFIC PROGRAMS

01. AGRICULTURAL BUSINESS AND PRODUCTION

- 01.01 Agricultural Business and Management
    - 01.0101 Agricultural Business and Management, General
    - 01.0102 Agricultural Business/Agribusiness Operations
    - 01.0103 Agricultural Economics
    - 01.0104 Farm and Ranch Management
    - 01.0199 Agricultural Business and Management, Other

- 01.02 Agricultural Mechanization
    - 01.0201 Agricultural Mechanization, General
    - 01.0204 Agricultural Power Machinery Operator
    - 01.0299 Agricultural Mechanization, Other

- 01.03 Agricultural Production Workers and Managers
    - 01.0301 Agricultural Production Workers and Managers, General
    - 01.0302 Agricultural Animal Husbandry and Production Management
    - 01.0303 Aquaculture Operations and Production Management
    - 01.0304 Crop Production Operations and Management
    - 01.0399 Agricultural Production Workers and Managers, Other

- 01.04 Agricultural and Food Products Processing
    - 01.0401 Agricultural and Food Products Processing Operations and Management

- 01.05 Agricultural Supplies and Related Services
    - 01.0501 Agricultural Supplies Retailing and Wholesaling
    - 01.0505 Animal Trainer
    - 01.0507 Equestrian/Equine Studies, Horse Management and Training
    - 01.0599 Agricultural Supplies and Related Services, Other

- 01.06 Horticulture Services Operations and Management
    - 01.0601 Horticulture Services Operations and Management, General
    - 01.0603 Ornamental Horticulture Operations and Management
    - 01.0604 Greenhouse Operations and Management
    - 01.0605 Landscaping Operations and Management
    - 01.0606 Nursery Operations and Management
    - 01.0607 Turf Management
    - 01.0699 Horticulture Services Operations and Management, Other

- 01.07 International Agriculture
    - 01.0701 International Agriculture

- 01.99 Agricultural Business and Production, Other
    - 01.9999 Agricultural Business and Production, Other

02. AGRICULTURAL SCIENCES

- 02.01 Agriculture/Agricultural Sciences
    - 02.0101 Agriculture/Agricultural Sciences, General
    - 02.0102 Agricultural Extension
    - *02.0103 Agricultural Chemistry*

- 02.02 Animal Sciences
    - 02.0201 Animal Sciences, General
    - 02.0202 Agricultural Animal Breeding and Genetics
    - 02.0203 Agricultural Animal Health
    - 02.0204 Agricultural Animal Nutrition
    - 02.0205 Agricultural Animal Physiology
    - 02.0206 Dairy Science
    - 02.0209 Poultry Science
    - 02.0299 Animal Sciences, Other

- 02.03 Food Sciences and Technology
    - 02.0301 Food Sciences and Technology

- 02.04 Plant Sciences
    - 02.0401 Plant Sciences, General
    - 02.0402 Agronomy and Crop Science
    - 02.0403 Horticulture Science
    - 02.0405 Plant Breeding and Genetics
    - 02.0406 Agricultural Plant Pathology
    - 02.0407 Agricultural Plant Physiology
    - 02.0408 Plant Protection (Pest Management)
    - 02.0409 Range Science and Management
    - 02.0499 Plant Sciences, Other

- 02.05 Soil Sciences
    - 02.0501 Soil Sciences

- 02.99 Agriculture/Agricultural Sciences, Other
    - 02.9999 Agriculture/Agricultural Sciences, Other

03. CONSERVATION AND RENEWABLE NATURAL RESOURCES

- 03.01 Natural Resources Conservation
    - 03.0101 Natural Resources Conservation, General
    - *03.0102 Environmental Science/~~Studies~~*
    - *03.0103 Environmental Studies*

- 03.02 Natural Resources Management and Policy
    - 03.0201 Natural Resources Management and Policy
    - ~~03.0203 Natural Resources Law Enforcement and Protective Services~~
    - *03.0204 Marine Resources Management*
    - 03.0299 Natural Resources Management and Policy, Other

- 03.03 Fishing and Fisheries Sciences and Management
  - 03.0301 Fishing and Fisheries Sciences and Management

- 03.04 Forest Production and Processing *Technologies/Technicians*
  - 03.0401 Forest Harvesting and Production Technology/Technician
  - 03.0404 Forest Products Technology/Technician
  - ~~03.0405 Logging/Timber Harvesting~~
  - 03.0499 Forest Production and Processing, *Technologies/Technicians*, Other

- 03.05 Forestry and Related Sciences
  - 03.0501 Forestry, General
  - 03.0502 Forestry Sciences
  - 03.0506 Forest Management
  - 03.0509 Wood Science and Pulp/Paper Technology
  - 03.0599 Forestry and Related Sciences, Other

- 03.06 Wildlife and Wildlands Management
  - 03.0601 Wildlife and Wildlands Management

- 03.99 Conservation and Renewable Natural Resources, Other
  - 03.9999 Conservation and Renewable Natural Resources, Other

04. ARCHITECTURE AND RELATED PROGRAMS

- 04.02 Architecture
  - 04.0201 Architecture

- 04.03 City/Urban, Community and Regional Planning
  - 04.0301 City/Urban, Community and Regional Planning

- 04.04 Architectural Environmental Design
  - 04.0401 Architectural Environmental Design

- 04.05 Interior Architecture
  - 04.0501 Interior Architecture

- 04.06 Landscape Architecture
  - 04.0601 Landscape Architecture

- 04.07 Architectural Urban Design and Planning
  - 04.0701 Architectural Urban Design and Planning

- 04.99 Architecture and Related Programs, Other
  - 04.9999 Architecture and Related Programs, Other

05. AREA, ETHNIC AND CULTURAL STUDIES

05.01 Area Studies
  05.0101 African Studies
  05.0102 American Studies/Civilization
  05.0103 Asian Studies
  05.0104 East Asian Studies
  ~~05.0105 Eastern European Area Studies~~
  05.0106 European *Area* Studies
  05.0107 Latin American Studies
  05.0108 Middle Eastern Studies
  ~~05.0109 Pacific Area Studies~~
  05.0110 Russian and Slavic Area Studies
  05.0111 Scandinavian Area Studies
  ~~05.0112 South Asian Studies~~
  ~~05.0113 Southeast Asian Studies~~
  ~~05.0114 Western European Studies~~
  05.0115 Canadian Studies
  05.0116 South and Southeast Asian Studies
  05.0199 Area Studies, Other

05.02 Ethnic and Cultural Studies
  05.0201 African-American (Black) Studies
  05.0202 American Indian/Native American Studies
  05.0203 Hispanic-American Studies
  05.0204 Islamic Studies
  05.0205 Jewish/Judaic Studies
  ~~05.0206 Asian-American Studies~~
  05.0207 Women's Studies
  05.0208 Regional and Cultural Minority Studies
  05.0299 Ethnic and Cultural Studies, Other

05.99 Area, Ethnic and Cultural Studies, Other
  05.9999 Area, Ethnic and Cultural Studies, Other

08. *SALES AND* MARKETING OPERATIONS/MARKETING AND DISTRIBUTION

08.01 Apparel and Accessories Marketing Operations
  08.0101 Apparel and Accessories Marketing Operations, General
  08.0102 Fashion Merchandising
  08.0103 Fashion Modeling
  08.0199 Apparel and Accessories Marketing Operations, Other

~~08.02 Business and Personal Services Marketing Operations~~
  ~~08.0204 Business Services Marketing Operations~~
  ~~08.0205 Personal Services Marketing Operations~~
  ~~08.0299 Business and Personal Services Marketing Operations, Other~~

- 08.03 Entrepreneurship
  - 08.0301 Entrepreneurship

- ~~08.04 Financial Services Marketing Operations~~
  - ~~08.0401 Financial Services Marketing Operations~~

- 08.05 Floristry Marketing Operations
  - 08.0503 Floristry Marketing Operations

- 08.06 Food Products Retailing and Wholesaling Operations
  - 08.0601 Food Products Retailing and Wholesaling Operations

- 08.07 General *Sales and Marketing*/~~Wholesaling and Retailing~~ Operations ~~and Skills~~.
  - ~~08.0701 Auctioneering~~
  - 08.0704 General Buying Operations
  - 08.0705 General Retailing Operations
  - 08.0706 General Selling Skills and Sales Operations
  - 08.0708 General *Sales and* Marketing Operations
  - ~~08.0709 General Distribution Operations~~
  - 08.0799 General *Sales and Marketing*/~~Wholesaling and Retailing~~ Operations ~~and Skills~~., Other

- ~~08.08 Home and Office Products Marketing Operations~~
  - ~~08.0809 Home Products Marketing Operations~~
  - ~~08.0810 Office Products Marketing Operations~~
  - ~~08.0899 Home and Office Products Marketing Operations, Other~~

- 08.09 Hospitality ~~and Recreation~~ Marketing Operations
  - 08.0901 Hospitality ~~and Recreation~~ Marketing Operations, General
  - 08.0902 Hotel/Motel Services Marketing Operations
  - ~~08.0903 Recreation Products/Services Marketing Operations~~
  - ~~08.0906 Food Sales Operations~~
  - 08.0999 Hospitality ~~and Recreation~~ Marketing Operations, Other

- 08.10 Insurance Marketing Operations
  - 08.1001 Insurance Marketing Operations

- 08.11 Tourism and Travel Services Marketing Operations
  - 08.1104 Tourism Promotion Operations
  - 08.1105 Travel Services Marketing Operations
  - 08.1199 Tourism and Travel Services Marketing Operations, Other

- 08.12 Vehicle ~~and Petroleum~~ Products Marketing Operations
  - 08.1203 Vehicle Parts and Accessories Marketing Operations
  - ~~08.1208 Vehicle Marketing Operations~~
  - ~~08.1209 Petroleum Products Retailing Operations~~
  - 08.1299 Vehicle ~~and Petroleum~~ Products Marketing Operations, Other

- ~~08.13 Health Products and Services Marketing Operations~~
  - ~~08.1301 Health Products and Services Marketing Operations~~

- 08.99 *Sales and* Marketing Operations/Marketing and Distribution, Other
  - 08.9999 *Sales and* Marketing Operations/Marketing and Distribution, Other

09. COMMUNICATIONS, *JOURNALISM AND RELATED FIELDS*

- 09.01 Communications, General
  - 09.0101 Communications, General

- 09.02 Advertising
  - 09.0201 Advertising

- 09.04 Journalism and Mass Communications
  - 09.0401 Journalism
  - 09.0402 Broadcast Journalism
  - 09.0403 Mass Communications
  - 09.0499 Journalism and Mass Communication, Other

- 09.05 Public Relations and Organizational Communications
  - 09.0501 Public Relations and Organizational Communications

- 09.07 Radio and Television Broadcasting
  - 09.0701 Radio and Television Broadcasting

- *09.09 Digital Communications and Media*
- *09.0901 Digital Communications and Media*

- 09.99 Communications, *Journalism and Related Fields*, Other
  - 09.9999 Communications, *Journalism and Related Fields*, Other

10. COMMUNICATIONS TECHNOLOGIES*/TECHNICIANS*

- 10.01 Communications Technologies*/Technicians*
  - ~~10.0101 Educational/Instructional Media Technology/Technician~~
  - 10.0103 Photographic Technology/Technician
  - 10.0104 Radio and Television Broadcasting Technology/Technician
  - *10.0105 Recording Arts Technology/Technician*
  - 10.0199 Communications Technologies/Technicians, Other

11. COMPUTER AND INFORMATION SCIENCES

- 11.01 Computer and Information Sciences, General
  - 11.0101 Computer and Information Sciences, General

- 11.02 Computer Programming
  - 11.0201 Computer Programming

- 11.03 Data Processing *Technologies/Technicians*
  - 11.0301 Data Processing Technology/Technician

- 11.04 Information Sciences and Systems
    - 11.0401 Information Sciences and Systems

- 11.05 Computer Systems Analysis
    - 11.0501 Computer Systems Analysis

- 11.07 Computer Science
    - 11.0701 Computer Science

- 11.99 Computer and Information Sciences, Other
    - 11.9999 Computer and Information Sciences, Other

12. PERSONAL AND MISCELLANEOUS SERVICES

- 12.02 Gaming and Sports Officiating Services
    - 12.0203 Card Dealer/*Games of Chance Attendant*
    - 12.0204 Umpires and Other Sports Officials
    - 12.0299 Gaming and Sports Officiating Services, Other

- 12.03 Funeral Services and Mortuary Science
    - 12.0301 Funeral Services and Mortuary Science

- 12.04 Cosmetic Services
    - 12.0401 Cosmetic Services, General
    - 12.0402 Barber/Hairstylist
    - 12.0403 Cosmetologist/*Esthetician*
    - 12.0404 Electrolysis Technician
    - 12.0405 Massage *(Non-Therapeutic)*
    - 12.0406 Makeup Artist
    - 12.0499 Cosmetic Services, Other

- 12.05 Culinary Arts and Related Services
    - 12.0501 Baker/Pastry Chef
    - 12.0502 Bartender/Mixologist
    - 12.0503 Culinary Arts/Chef Training
    - 12.0504 Food and Beverage/Restaurant Operations Manager
    - 12.0505 Kitchen Personnel/Cook and Assistant Training
    - 12.0506 Meatcutter
    - 12.0507 Waiter/Waitress and Dining Room Manager
    - 12.0599 Culinary Arts and Related Services, Other

- 12.99 Personal and Miscellaneous Services, Other
    - 12.9999 Personal and Miscellaneous Services, Other

13. EDUCATION

- 13.01 Education, General
    - 13.0101 Education, General

- 13.02 Bilingual/Bicultural Education and Teaching
  - 13.0201 Bilingual/Bicultural Education and Teaching

- 13.03 Curriculum and Instruction
  - 13.0301 Curriculum and Instruction

- 13.04 Education Administration and Supervision/Leadership
  - 13.0401 Education Administration and Supervision/Leadership, General
  - ~~13.0402 Administration of Special Education~~
  - 13.0403 Adult and Continuing Education Administration
  - 13.0404 Educational Supervision
  - 13.0405 Elementary, Middle and Secondary Education Administration
  - 13.0406 Higher Education Administration
  - ~~13.0407 Community and Junior College Administration~~
  - 13.0499 Education Administration and Supervision/Leadership, Other

- 13.05 Educational/Instructional Media Design
  - 13.0501 Educational/Instructional Media Design

- 13.06 Educational Evaluation, Research and Statistics
  - 13.0601 Educational Evaluation and Research
  - 13.0603 Educational Statistics and Research Methods
  - 13.0604 Educational Assessment, Testing and Measurement
  - 13.0699 Educational Evaluation, Research and Statistics, Other

- 13.07 International and Comparative Education
  - 13.0701 International and Comparative Education

- ~~13.08 Educational Psychology~~ (Moved to 42.18)
  - ~~13.0802 Educational Psychology~~ (Moved to 42.1801)

- 13.09 Social and Philosophical Foundations of Education
  - 13.0901 Social and Philosophical Foundations of Education

- 13.10 Special Education/*Teaching*
  - 13.1001 Special Education/*Teaching*, General
  - 13.1003 Education/*Teaching* of the Deaf and Hearing Impaired
  - 13.1004 Education/*Teaching* of the Gifted and Talented
  - 13.1005 Education/*Teaching* of the Emotionally Handicapped
  - 13.1006 Education/*Teaching* of the Mentally Handicapped
  - 13.1007 Education/*Teaching* of the Multiple Handicapped
  - 13.1008 Education/*Teaching* of the Physically Handicapped
  - 13.1009 Education/*Teaching* of the Blind and Visually Handicapped
  - 13.1011 Education/*Teaching* of the Specific Learning Disabled
  - 13.1012 Education/*Teaching* of the Speech Impaired
  - 13.1013 Education/*Teaching* of the Autistic
  - 13.1099 Special Education/*Teaching*, Other

- 13.11 Student Counseling and Personnel Services
  - 13.1101 Counselor Education Counseling and Guidance Services
  - 13.1102 College/Postsecondary Student Counseling and Personnel Services

- 13.12 General Teacher Education
  - 13.1201 Adult and Continuing Teacher Education
  - 13.1202 Elementary Teacher Education
  - 13.1203 Junior High/Intermediate/Middle School Teacher Education
  - 13.1204 Pre-Elementary/Early Childhood/Kindergarten Teacher Education
  - 13.1205 Secondary Teacher Education
  - 13.1206 Teacher Education, Multiple Levels
  - *13.1207 Montessori Teacher Education, Multiple Levels*
  - *13.1208 Waldorf/Steiner Teacher Education, Multiple Levels*
  - 13.1299 General Teacher Education, Other

- 13.13 Teacher Education, Specific Academic and Vocational Programs
  - 13.1301 Agricultural Teacher Education
  - 13.1302 Art Teacher Education
  - 13.1303 Business Teacher Education
  - 13.1304 Driver and Safety Teacher Education
  - 13.1305 English Teacher Education
  - 13.1306 Foreign Languages Teacher Education, *Other Than French, German or Spanish*
  - 13.1307 Health Teacher Education
  - 13.1308 *Family and Consumer Sciences*/Home Economics Teacher Education
  - 13.1309 Technology Teacher Education/Industrial Arts Teacher Education
  - 13.1310 *Sales and* Marketing Operations/Marketing and Distribution Teacher Education
  - 13.1311 Mathematics Teacher Education
  - 13.1312 Music Teacher Education
  - 13.1314 Physical Education Teaching and Coaching
  - 13.1315 Reading Teacher Education
  - 13.1316 Science Teacher Education, General
  - 13.1317 Social Science Teacher Education
  - 13.1318 Social Studies Teacher Education
  - 13.1319 Technical Teacher Education
  - 13.1320 Trade and Industrial Teacher Education
  - 13.1321 Computer Teacher Education
  - 13.1322 Biology Teacher Education
  - 13.1323 Chemistry Teacher Education
  - 13.1324 Drama and Dance Teacher Education
  - 13.1325 French Language Teacher Education
  - 13.1326 German Language Teacher Education
  - 13.1327 Health Occupations Teacher Education
  - 13.1328 History Teacher Education
  - 13.1329 Physics Teacher Education
  - 13.1330 Spanish Language Teacher Education
  - 13.1331 Speech Teacher Education
  - *13.1332 Geography Teacher Education*
  - 13.1399 Teacher Education, Specific Academic and Vocational Programs, Other

- 13.14 Teaching English *or French* as a Second *or Foreign* Language
  - 13.1401 Teaching English as a Second or *Foreign* Language
  - *13.1402 Teaching French as a Second or Foreign Language*

- 13.15 Teacher Assistant/Aide
  - 13.1501 Teacher Assistant/Aide
  - *13.1502 Adult Literacy Tutor*

- 13.99 Education, Other
  - 13.9999 Education, Other

14. ENGINEERING

- 14.01 Engineering, General
  - 14.0101 Engineering, General

- 14.02 Aerospace, Aeronautical and Astronautical Engineering
  - 14.0201 Aerospace, Aeronautical and Astronautical Engineering

- 14.03 Agricultural Engineering
  - 14.0301 Agricultural Engineering

- 14.04 Architectural Engineering
  - 14.0401 Architectural Engineering

- 14.05 Bioengineering and Biomedical Engineering
  - 14.0501 Bioengineering and Biomedical Engineering

- 14.06 Ceramic Sciences and Engineering
  - 14.0601 Ceramic Sciences and Engineering

- 14.07 Chemical Engineering
  - 14.0701 Chemical Engineering

- 14.08 Civil Engineering
  - 14.0801 Civil Engineering, General
  - ~~14.0802 Geotechnical Engineering~~
  - ~~14.0803 Structural Engineering~~
  - 14.0804 Transportation and Highway Engineering
  - 14.0805 Water Resources Engineering
  - 14.0899 Civil Engineering, Other

- 14.09 Computer Engineering
  - 14.0901 Computer Engineering, *General*
  - *14.0902 Computer Hardware Engineering*
  - *14.0903 Computer Software Engineering*
  - *14.0999 Computer Engineering, Other*

- 14.10 Electrical, Electronics and Communications Engineering
  - 14.1001 Electrical, Electronics and Communications Engineering

- 14.11 Engineering Mechanics
    - 14.1101 Engineering Mechanics

- 14.12 Engineering Physics
    - 14.1201 Engineering Physics

- 14.13 Engineering Science
    - 14.1301 Engineering Science

- 14.14 Environmental/Environmental Health Engineering
    - 14.1401 Environmental/Environmental Health Engineering

- 14.15 Geological Engineering *and Geophysical Engineering*
    - 14.1501 Geological Engineering *and Geophysical Engineering*

- ~~14.16 Geophysical Engineering~~
    - ~~14.1601 Geophysical Engineering~~

- *14.17 Industrial/~~Manufacturing~~ Engineering* (Manufacturing Engineering Moved to 14.35)
    - *14.1701 Industrial/~~Manufacturing~~ Engineering* (Manufacturing Engineering Moved to 14.3501)

- 14.18 Materials Engineering
    - 14.1801 Materials Engineering

- 14.19 Mechanical Engineering
    - 14.1901 Mechanical Engineering

- 14.20 Metallurgical Engineering
    - 14.2001 Metallurgical Engineering

- 14.21 Mining and Mineral Engineering
    - 14.2101 Mining and Mineral Engineering

- 14.22 Naval Architecture and Marine Engineering
    - 14.2201 Naval Architecture and Marine Engineering

- 14.23 Nuclear Engineering
    - 14.2301 Nuclear Engineering

- 14.24 Ocean Engineering
    - 14.2401 Ocean Engineering

- 14.25 Petroleum Engineering
    - 14.2501 Petroleum Engineering

- 14.27 Systems Engineering
    - 14.2701 Systems Engineering

14.28 Textile Sciences and Engineering
14.2801 Textile Sciences and Engineering

~~14.29 Engineering Design~~
~~14.2901 Engineering Design~~

14.30 Engineering~~/Industrial~~ Management
14.3001 Engineering~~/Industrial~~ Management (Industrial Management Moved to 15.0613)

14.31 Materials Science
14.3101 Materials Science

14.32 Polymer/Plastics Engineering
14.3201 Polymer/Plastics Engineering

14.33 Construction Engineering
14.3301 Construction Engineering

14.34 Forest Engineering
14.3401 Forest Engineering

14.35 Manufacturing Engineering
14.3501 Manufacturing Engineering

14.36 Surveying Engineering
14.3601 Surveying Engineering

14.99 Engineering, Other
14.9999 Engineering, Other

15. ENGINEERING~~-RELATED~~ TECHNOLOGIES/*TECHNICIANS*

15.01 Architectural Engineering *Technologies/Technicians*
15.0101 Architectural Engineering Technology/Technician

15.02 Civil Engineering~~/Civil~~ *Technologies/Technicians*
15.0201 Civil Engineering~~/Civil~~ Technology/Technician

15.03 Electrical ~~and Electronic~~ Engineering~~-Related~~ *Technologies/Technicians*
~~15.0301 Computer Engineering Technology/Technician~~ (Moved to 15.1201)
15.0303 Electrical, Electronic and Communications Engineering Technology/Technician
15.0304 Laser and Optical Technology/Technician
15.0305 Telecommunications Technology/Technician
15.0399 Electrical ~~and Electronic~~ Engineering~~-Related~~ Technologies/Technicians, Other

15.04 Electromechanical Instrumentation and Maintenance *Technologies/Technicians*
15.0401 Bio~~medical~~ Engineering~~-Related~~ Technology/Technician
15.0402 Computer Maintenance Technology/Technician
15.0403 Electromechanical Technology/Technician
15.0404 Instrumentation/Measurement/Control Technology/Technician
15.0405 Robotics Technology/Technician
15.0499 Electromechanical Instrumentation and MaintenanceTechnologies/Technicians, Other

15.05 Environmental Control Technologies*/Technicians*
15.0501 ~~Heating,~~ Air Conditioning ~~and Refrigeration~~ Engineering Technology/Technician
15.0503 Energy Management and Systems Technology/Technician
~~15.0505 Solar Technology/Technician~~
15.0506 Water Quality and Waste~~water Treatment~~ Management *and Recycling* Technology/Technician
15.0507 Environmental/*Hazardous Materials* and Pollution Control Technology/Technician
15.0599 Environmental Control Technologies/Technicians, Other

15.06 Industrial Production Technologies*/Technicians*
*15.0603 Industrial/~~Manufacturing~~ Technology/Technician (*Manufacturing Technology/Technician Moved to 15.0612*)*
15.0607 Plastics Technology/Technician
15.0611 Metallurgical Technology/Technician
15.0612 Manufacturing Engineering Technology/Technician
15.0613 Industrial Management
15.0699 Industrial Production Technologies/Technicians, Other

15.07 Quality Control and Safety Technologies*/Technicians*
15.0701 Occupational Safety and Health Technology/Technician
15.0702 Quality Control Technology/Technician
15.0703 Industrial Safety/Occupational Safety
15.0704 Hazardous Materials Information Systems Technology/Technician
15.0705 Industrial/Occupational Hygiene
15.0799 Quality Control and Safety Technologies/Technicians, Other

15.08 Mechanical Engineering~~-Related~~ Technologies*/Technicians*
15.0801 Aeronautical and Aerospace Engineering Technology/Technician
15.0803 Automotive Engineering Technology/Technician
15.0805 Mechanical Engineering/Mechanical Technology/Technician
15.0899 Mechanical Engineering~~-Related~~ Technologies/Technicians, Other

15.09 Mining and Petroleum Technologies*/Technicians*
15.0901 Mining Technology/Technician
15.0903 Petroleum Technology/Technician
15.0904 Mining Technology/Technician
15.0999 Mining and Petroleum Technologies/Technicians, Other

15.10 Construction/Building *Technologies/Technicians*
15.1001 Construction/Building Technology/Technician

15.11 Miscellaneous Engineering~~-Related~~ Technologies*/Technicians*
15.1101 Engineering~~-Related~~ Technology/Technician, General
15.1102 Surveying *and Mapping*
15.1103 Hydraulic Technology/Technician

15.12 Computer Engineering Technologies/Technicians
15.1201 Computer Engineering Technology/Technician, General
15.1202 Computer Hardware Technology/Technician
15.1203 Computer Software Technology/Technician
15.1299 Computer Engineering, Other

15.13 Drafting/Design Engineering Technologies/Technicians
15.1301 Drafting/Design Engineering Technology/Technician, General
15.1302 CAD/CAM Design Application Technology/Technician
15.1399 Drafting/Design Engineering Technologies/Technicians, Other

15.14 Nuclear Engineering Technologies/Technicians
15.1401 Nuclear Engineering Technology/Technician

15.99 Engineering~~-Related~~ Technologies*/Technicians*, Other
15.9999 Engineering~~-Related~~ Technologies/Technicians, Other

16. FOREIGN LANGUAGES AND LITERATURES

16.01 Foreign Languages and Literatures
16.0101 Foreign Languages and Literatures, General
16.0102 Linguistics
16.0103 Foreign Language Interpretation and Translation

16.03 East, *South*, and Southeast Asian Languages and Literatures
16.0301 Chinese Language and Literature
16.0302 Japanese Language and Literature
16.0399 East, *South*, and Southeast Asian Languages and Literatures, Other

16.04 Slavic and East European Languages and Literatures
16.0402 Russian Language and Literature
16.0403 Slavic Languages and Literatures *(Other Than Russian)*
16.0499 Slavic and East European Languages and Literatures, Other

16.05 Germanic Languages and Literatures
16.0501 German Language and Literature
16.0502 Scandinavian Languages and Literatures
16.0599 Germanic Languages and Literatures, Other

~~16.06 Greek Languages and Literatures (Modern)~~
~~16.0602 Greek Language and Literature (Modern~~)

~~16.07 South Asian Languages and Literatures~~
~~16.0703 South Asian Languages and Literatures~~

16.09 Romance Languages and Literatures
    16.0901 French Language and Literature
    16.0902 Italian Language and Literature
    16.0904 Portuguese Language and Literature
    16.0905 Spanish Language and Literature
    16.0999 Romance Languages and Literatures, Other

16.10 Native American/American Indian Languages and Literatures
    16.1001 Native American/American Indian Languages and Literatures

16.11 Middle Eastern Languages and Literatures
    16.1101 Arabic Language and Literature
    16.1102 Hebrew Language and Literature
    16.1199 Middle Eastern Languages and Literatures, Other

16.12 Classical and Ancient Near Eastern Languages and Literatures
    16.1201 Classics and Classical Languages and Literatures
    16.1202 Greek Language and Literature (Ancient and Medieval)
    16.1203 Latin Language and Literature (Ancient and Medieval)
    16.1299 Classical and Ancient Near Eastern Languages and Literatures, Other

16.13 Celtic Languages and Literature
    16.1301 Celtic Languages and Literature

16.99 Foreign Languages and Literatures, Other
    16.9999 Foreign Languages and Literatures, Other

19. *COLLEGIATE FAMILY AND CONSUMER SCIENCES*/HOME ECONOMICS

19.01 Collegiate *Family and Consumer Sciences*, General/Home Economics, General
    19.0101 Collegiate *Family and Consumer Sciences*/Home Economics, General

~~19.02 *Family and Consumer Sciences Business Services*/Home Economics Business Services~~
    ~~19.0201 *Business Family and Consumer Sciences*/ Business Home Economics~~
    ~~19.0202 *Family and Consumer Sciences Communications*/Home Economics Communications~~

19.03 *Career, Community and Family Studies*/~~Family and Community Studies~~
    19.0301 *Career, Community and Family*/~~Family and Community Studies~~

19.04 *Consumer and Family Resources*/~~Family/Consumer Resource~~ Management
    19.0401 Family Resource Management Studies
    19.0402 Consumer Economics and Science
    19.0499 *Consumer and Family Resources*/~~Family/Consumer Resource~~ Management, Other

- 19.05 Foods, *Dietetics* and Nutrition Studies
  - 19.0501 Foods, *Dietetics* and Nutrition Studies, General
  - 19.0502 Foods and Nutrition Science
  - 19.0503 Dietetics/Human Nutritional Services
  - 19.0505 Food Systems Administration
  - 19.0599 Foods, *Dietetics* and Nutrition Studies, Other

- 19.06 *Housing, Interiors and Furnishings Studies/*~~Housing Studies~~
  - 19.0601 *Housing, Interiors and Furnishings Studies/*~~Housing Studies~~, General
  - 19.0603 Interior Environments
  - 19.0699 *Housing, Interiors and Furnishings Studies/*~~Housing Studies~~, Other

- 19.07 *Family and Human Development Studies/*~~Individual and Family Development Studies~~
  - ~~*19.0701 Family and Human Development Studies/*Individual and Family Development Studies, *General*~~ (Moved to 42.0701)
  - ~~19.0703 Family and Marriage Counseling~~ (Moved to 42.1901)
  - 19.0704 Family Life and Relations Studies
  - 19.0705 Gerontological Services
  - 19.0706 Child Growth, Care and Development Studies
  - 19.0799 *Family and Human Development Studies/*~~Individual and Family Development Studies,~~ Other

- 19.09 *Textiles and Apparel Studies/*~~Clothing/Apparel and Textile Studies~~
  - 19.0901 *Textiles and Apparel Studies/*~~Clothing/Apparel and Textile Studies~~

- 19.99 *Collegiate Family and Consumer Sciences/*Home Economics, Other
  - 19.9999 *Collegiate Family and Consumer Sciences/*Home Economics, Other

20. *VOCATIONAL FAMILY AND CONSUMER SCIENCES/*VOCATIONAL HOME ECONOMICS

- 20.02 *Child Care Services/*~~Child Care and Guidance~~ Workers and Managers
  - 20.0201 *Child Care Services/*~~Child Care and Guidance~~ Workers and Managers, General
  - 20.0202 Child Care Provider/Assistant
  - 20.0203 Child Care Services Manager
  - 20.0299 *Child Care Services/*~~Child Care and Guidance~~ Workers and Managers, Other

- 20.03 *Textiles and Apparel/*~~Clothing, Apparel and Textile~~ Workers and Managers
  - 20.0301 *Textiles and Apparel/*~~Clothing, Apparel and Textile~~ Workers and Managers, General
  - 20.0303 Commercial Garment and Apparel Worker
  - 20.0305 Custom Tailor
  - 20.0306 Fashion and Fabric Consultant
  - ~~20.0309 Drycleaner and Launderer (Commercial)~~
  - 20.0399 *Textiles and Apparel/*~~Clothing, Apparel and Textile~~ Workers and Managers, Other

- 20.04 *Food Production and Services/*~~Institutional Food~~ Workers and Administrators
    - 20.0401 *Food Production and Services/*~~Institutional Food~~ Workers and Administrators
    - 20.0404 Dietician Assistant
    - 20.0405 Food Catering
    - 20.0409 Institutional Food Services Administrator
    - 20.0499 *Food Production and Services/*~~Institutional Food~~ Workers and Administrators, Other

- 20.05 Home Furnishings ~~and Equipment Installers and~~ Consultants
    - 20.0501 Home Furnishings ~~and Equipment Installers and~~ Consultants~~, General~~
    - ~~20.0502 Window Treatment Maker and Installer~~
    - ~~20.0599 Home Furnishings and Equipment Installers and Consultants, Other~~

- 20.06 Custodial, Housekeeping and Home Services Workers and Managers
    - 20.0601 Custodial, Housekeeping and Home Services Workers and Managers, General
    - 20.0602 Elder Care Provider/Companion
    - 20.0604 Custodian/Caretaker
    - 20.0605 Executive Housekeeper
    - 20.0606 Homemaker's Aide
    - 20.0699 Custodial, Housekeeping and Home Services Workers and Managers, Other

- 20.99 *Vocational Family and Consumer Sciences/*Home Economics, Other
    - 20.9999 *Vocational Family and Consumer Sciences/*Home Economics, Other

22. LAW AND LEGAL STUDIES

- 22.01 Law and Legal Studies
    - 22.0101 Law (LL.B.,JD)
    - 22.0102 Pre-Law Studies
    - 22.0103 Paralegal/Legal Assistant
    - 22.0104 Juridical Science/Legal Specialization (LL.M., M.C.L., J.S.D./S.J.D.)
    - 22.0199 Law and Legal Studies, Other

23. ENGLISH LANGUAGE AND LITERATURE/LETTERS

- 23.01 English Language and Literature, General
    - 23.0101 English Language and Literature, General

- 23.03 Comparative Literature
    - 23.0301 Comparative Literature

- 23.04 English Composition
    - 23.0401 English Composition

- 23.05 English Creative Writing
    - 23.0501 English Creative Writing

- **23.07 American Literature (United States *and Canadian*)**
  - **23.0701 American Literature (United States)**
  - *23.0702 American Literature (Canadian)*

- **23.08 English Literature (British and Commonwealth)**
  - **23.0801 English Literature (British and Commonwealth)**

- **23.10 Speech and Rhetorical Studies**
  - **23.1001 Speech and Rhetorical Studies**

- **23.11 English Technical and Business Writing**
  - **23.1101 English Technical and Business Writing**

- **23.99 English Language and Literature/Letters, Other**
  - **23.9999 English Language and Literature/Letters, Other**

24. LIBERAL ARTS AND SCIENCES, GENERAL STUDIES AND HUMANITIES

- **24.01 Liberal Arts and Sciences, General Studies and Humanities**
  - **24.0101 Liberal Arts and Sciences/Liberal Studies**
  - **24.0102 General Studies**
  - **24.0103 Humanities/Humanistic Studies**
  - **24.0199 Liberal Art and Sciences, General Studies and Humanities, Other**

25. LIBRARY SCIENCE

- **25.01 Library Science/Librarianship**
  - **25.0101 Library Science/Librarianship**

- **25.03 Library Assistant**
  - **25.0301 Library Assistant**

- **25.99 Library Science, Other**
  - **25.9999 Library Science, Other**

26. BIOLOGICAL SCIENCES/LIFE SCIENCES

- **26.01 Biology, General**
  - **26.0101 Biology, General**

- **26.02 Biochemistry and Biophysics**
  - **26.0202 Biochemistry**
  - **26.0203 Biophysics**

- 26.03 Botany
    - 26.0301 Botany, General
    - *26.0304 Plant Genetics*
    - 26.0305 Plant Pathology
    - 26.0307 Plant Physiology
    - 26.0399 Botany, Other

- 26.04 Cell and Molecular Biology
    - 26.0401 Cell Biology
    - 26.0402 Molecular Biology
    - ~~26.0499 Cell and Molecular Biology, Other~~

- 26.05 Microbiology and Bacteriology
    - *26.0501 Microbiology/~~Bacteriology~~*
    - *26.0502 Bacteriology*

- 26.06 Miscellaneous Biological Specializations
    - 26.0601 Anatomy
    - 26.0603 Ecology
    - *26.0604 Developmental Biology/Embryology*
    - 26.0607 Marine/Aquatic Biology
    - 26.0608 Neuroscience
    - 26.0609 Nutritional Sciences
    - 26.0610 Parasitology
    - 26.0611 Radiation Biology/Radiobiology
    - 26.0612 Toxicology
    - 26.0613 Genetics, Plant and Animal
    - 26.0614 Biometrics
    - 26.0615 Biostatistics
    - 26.0616 Biotechnology Research
    - 26.0617 Evolutionary Biology
    - 26.0618 Biological Immunology
    - 26.0619 Virology
    - 26.0699 Miscellaneous Biological Specializations, Other

- 26.07 Zoology
    - 26.0701 Zoology, General
    - 26.0702 Entomology
    - *26.0703 Genetic, Human and Animal*
    - 26.0704 Pathology, Human and Animal
    - 26.0705 Pharmacology, Human and Animal
    - 26.0706 Physiology, Human and Animal
    - 26.0799 Zoology, Other

- 26.99 Biological Sciences/Life Sciences, Other
    - 26.9999 Biological Sciences/Life Sciences, Other

27. MATHEMATICS

- **27.01 Mathematics**
  - **27.0101 Mathematics,** ***General***
  - ***27.0102 Algebra***
  - ***27.0103 Analysis and Functional Analysis***
  - ***27.0104 Geometry***
  - ***27.0105 Logic***
  - ***27.0106 Number Theory***
  - ***27.0107 Topology***

- **27.03 Applied Mathematics**
  - **27.0301 Applied Mathematics, General**
  - **27.0302 Operations Research**
  - ***27.0303 Computing Theory***
  - **27.0399 Applied Mathematics, Other**

- **27.05 Mathematical Statistics**
  - **27.0501 Mathematical Statistics**

- **27.99 Mathematics, Other**
  - **27.9999 Mathematics, Other**

29. MILITARY TECHNOLOGIES

- **29.01 Military Technologies**
  - **29.0101 Military Technologies**

30. MULTI/INTERDISCIPLINARY STUDIES

- **30.01 Biological and Physical Sciences**
  - **30.0101 Biological and Physical Sciences**

- **30.05 Peace and Conflict Studies**
  - **30.0501 Peace and Conflict Studies**

- **30.06 Systems Science and Theory**
  - **30.0601 Systems Science and Theory**

- **30.08 Mathematics and Computer Science**
  - **30.0801 Mathematics and Computer Science**

- **30.10 Biopsychology**
  - **30.1001 Biopsychology**

- **30.11 Gerontology**
  - **30.1101 Gerontology**

- **30.12 Historic Preservation, Conservation and Architectural History**
  - **30.1201 Historic Preservation, Conservation and Architectural History**

- **30.13 Medieval and Renaissance Studies**
  - **30.1301 Medieval and Renaissance Studies**

- **30.14 Museology/Museum Studies**
  - **30.1401 Museology/Museum Studies**

- **30.15 Science, Technology and Society**
  - **30.1501 Science, Technology and Society**

- ***30.16 Accounting and Computer Science***
  - ***30.1601 Accounting and Computer Science***

- **30.99 Multi/Interdisciplinary Studies, Other**
  - **30.9999 Multi/Interdisciplinary Studies, Other**

31. PARKS, RECREATION, LEISURE AND FITNESS STUDIES

- **31.01 Parks, Recreation and Leisure Studies**
  - **31.0101 Parks, Recreation and Leisure Studies**

- **31.03 Parks, Recreation and Leisure Facilities Management**
  - **31.0301 Parks, Recreation and Leisure Facilities Management**

- **31.05 Health and Physical Education/Fitness**
  - **31.0501 Health and Physical Education, General**
  - **31.0502 Adapted Physical Education/Therapeutic Recreation**
  - **31.0503 Athletic Training and Sports Medicine**
  - **31.0504 Sport and Fitness Administration/Management**
  - **31.0505 Exercise Sciences/Physiology and ~~Movement Studies~~ *Kinesiology***
  - **~~31.0506 Socio-Psychological Sports Studies~~**
  - **31.0599 Health and Physical Education/Fitness, Other**

- **31.99 Parks, Recreation, Leisure and Fitness Studies, Other**
  - **31.9999 Parks, Recreation, Leisure and Fitness Studies, Other**

38. PHILOSOPHY AND RELIGION

- **38.01 Philosophy**
  - **38.0101 Philosophy**

- **38.02 Religion/Religious Studies**
  - **38.0201 Religion/Religious Studies**

- **38.99 Philosophy and Religion, Other**
  - **38.9999 Philosophy and Religion, Other**

39. THEOLOGICAL STUDIES AND RELIGIOUS VOCATIONS

- **39.01 Biblical and Other Theological Languages and Literatures**
  - **39.0101 Biblical and Other Theological Languages and Literatures**

- **39.02 Bible/Biblical Studies**
  - **39.0201 Bible/Biblical Studies**

- **39.03 Missions/Missionary Studies and Missiology**
  - **39.0301 Missions/Missionary Studies and Missiology**

- **39.04 Religious Education**
  - **39.0401 Religious Education**

- **39.05 Religious/Sacred Music**
  - **39.0501 Religious/Sacred Music**

- **39.06 Theological and Ministerial Studies**
  - **39.0601 Theology/Theological Studies**
  - **39.0602 Divinity/Ministry (BD, MDiv.)**
  - **39.0603 Rabbinical and Talmudic Studies (M.H.L./Rav)**
  - **39.0604 Pre-Theological/Pre-Ministerial Studies**
  - ***39.0605 Ordination, Other Than Divinity/Ministry and Rabbinical***
  - ***39.0606 Talmudic Studies, Pre-Rabbinical***
  - **39.0699 Theological and Ministerial Studies, Other**

- **39.07 Pastoral Counseling and Specialized Ministries**
  - ***39.0701 Clinical Pastoral Counseling***
  - ***39.0799 Pastoral Counseling and Specialized Ministries, Other***

- **39.99 Theological Studies and Religious Vocations, Other**
  - **39.9999 Theological Studies and Religious Vocations, Other**

40. PHYSICAL SCIENCES

- **40.01 Physical Sciences, General**
  - **40.0101 Physical Sciences, General**

- **40.02 Astronomy**
  - **40.0201 Astronomy**

- **40.03 Astrophysics**
  - **40.0301 Astrophysics**

- **40.04 Atmospheric Sciences and Meteorology**
  - **40.0401 Atmospheric Sciences and Meteorology, *General***
  - ***40.0402 Atmospheric Physics and Chemistry***
  - ***40.0403 Atmospheric Dynamics***
  - ***40.0404 Meteorology***
  - ***40.0499 Atmospheric Sciences and Meteorology, Other***

- 40.05 Chemistry
    - 40.0501 Chemistry, General
    - 40.0502 Analytical Chemistry
    - 40.0503 Inorganic Chemistry
    - 40.0504 Organic Chemistry
    - 40.0505 Medicinal/Pharmaceutical Chemistry
    - 40.0506 Physical and Theoretical Chemistry
    - 40.0507 Polymer Chemistry
    - *40.0508 Nuclear Chemistry*
    - 40.0599 Chemistry, Other

- 40.06 Geological and Related Sciences
    - 40.0601 Geology, *General*
    - 40.0602 Geochemistry
    - 40.0603 Geophysics and Seismology
    - 40.0604 Paleontology
    - *40.0605 Mineralogy and Petrology*
    - *40.0606 Stratigraphy and Sedimentology*
    - *40.0607 Geomorphology and Glacial Geology*
    - 40.0699 Geological and Related Sciences, Other

- 40.07 Miscellaneous Physical Sciences
    - ~~40.0701 Metallurgy~~
    - 40.0702 Oceanography
    - 40.0703 Earth and Planetary Sciences
    - *40.0704 Hydrology and Water Resources*
    - *40.0705 Marine Sciences*
    - 40.0799 Miscellaneous Physical Sciences, Other

- 40.08 Physics
    - 40.0801 Physics, General
    - 40.0802 Chemical and Atomic/Molecular Physics
    - 40.0804 Elementary Particle Physics
    - 40.0805 Plasma and High-Temperature Physics
    - 40.0806 Nuclear Physics
    - 40.0807 Optics
    - 40.0808 Solid State and Low-Temperature Physics
    - 40.0809 Acoustics
    - 40.0810 Theoretical and Mathematical Physics
    - *40.0811 Fluids*
    - *40.0812 Polymer Physics*
    - 40.0899 Physics, Other

- 40.99 Physical Sciences, Other
    - 40.9999 Physical Sciences, Other

41. SCIENCE TECHNOLOGIES/*TECHNICIANS*

- **41.01 Biological *Technologies/Technicians***
  - **41.0101 Biological Technology/Technician**

- **41.02 Nuclear and Industrial Radiologic Technologies/*Technicians***
  - **41.0204 Industrial Radiologic Technology/Technician**
  - **41.0205 Nuclear/Nuclear Power Technology/Technician**
  - **41.0299 Nuclear and Industrial Radiologic Technologies/Technicians, Other**

- **41.03 Physical Science Technologies/*Technicians***
  - **41.0301 Chemical Technology/Technician**
  - **41.0399 Physical Science Technologies/Technicians, Other**

- ***41.04 Scientific Laboratory Technologies/Technicians***
  - ***41.0401 Scientific Laboratory Technology/Technician***

- **41.99 Science Technologies/*Technicians*, Other**
  - **41.9999 Science Technologies/Technicians, Other**

42. PSYCHOLOGY

- **42.01 Psychology**
  - **42.0101 Psychology, General**

- **42.02 Clinical Psychology**
  - **42.0201 Clinical Psychology**

- **42.03 Cognitive Psychology and Psycholinguistics**
  - **42.0301 Cognitive Psychology and Psycholinguistics**

- **42.04 Community Psychology**
  - **42.0401 Community Psychology**

- ***42.05 Comparative Psychology***
  - ***42.0501 Comparative Psychology***

- **42.06 Counseling Psychology**
  - **42.0601 Counseling Psychology**

- **42.07 Developmental and Child Psychology**
  - **42.0701 Developmental and Child Psychology**

- **42.08 Experimental Psychology**
  - **42.0801 Experimental Psychology**

- **42.09 Industrial and Organizational Psychology**
  - **42.0901 Industrial and Organizational Psychology**

- *42.10 Personality Psychology*
  - *42.1001 Personality Psychology*

- 42.11 Physiological Psychology/Psychobiology
  - 42.1101 Physiological Psychology/Psychobiology

- *42.13 Psychometrics*
  - *42.1301 Psychometrics*

- *42.15 Quantitative Psychology*
  - *42.1501 Quantitative Psychology*

- 42.16 Social Psychology
  - 42.1601 Social Psychology

- 42.17 School Psychology
  - 42.1701 School Psychology

- *42.18 Educational Psychology*
  - *42.1801 Educational Psychology*

- *42.19 Marriage and Family Counseling*
  - *42.1901 Marriage and Family Counseling*

- 42.99 Psychology, Other
  - 42.9999 Psychology, Other

43. PROTECTIVE SERVICES

- 43.01 Criminal Justice and Corrections
  - 43.0102 Corrections/Correctional Administration
  - 43.0103 Criminal Justice/Law Enforcement Administration
  - 43.0104 Criminal Justice Studies
  - 43.0106 Forensic Technology/Technician
  - 43.0107 Law Enforcement/Police Science
  - 43.0109 Security and Loss Prevention Services
  - 43.0199 Criminal Justice and Corrections, Other

- 43.02 Fire Protection
  - 43.0201 Fire Protection and Safety Technology/Technician
  - 43.0202 Fire Services Administration
  - 43.0203 Fire Science/Firefighting
  - 43.0299 Fire Protection, Other

- 43.99 Protective Services, Other
  - 43.9999 Protective Services, Other

44. PUBLIC ADMINISTRATION AND SERVICES

- 44.02 Community Organization, Resources and Services
  - 44.0201 Community Organization, Resources and Services

- 44.04 Public Administration
  - 44.0401 Public Administration

- 44.05 Public Policy Analysis
  - 44.0501 Public Policy Analysis

- 44.07 Social Work
  - 44.0701 Social Work

- 44.99 Public Administration and Services, Other
  - 44.9999 Public Administration and Services, Other

45. SOCIAL SCIENCES AND HISTORY

- 45.01 Social Sciences, General
  - 45.0101 Social Sciences, General

- 45.02 Anthropology
  - 45.0201 Anthropology

- 45.03 Archeology
  - 45.0301 Archeology

- 45.04 Criminology
  - 45.0401 Criminology

- 45.05 Demography and Population Studies
  - 45.0501 Demography and Population Studies

- 45.06 Economics
  - 45.0601 Economics, General
  - 45.0602 Applied and Resource Economics
  - 45.0603 Econometrics and Quantitative Economics
  - 45.0604 Development Economics and International Development
  - 45.0605 International Economics
  - 45.0699 Economics, Other

- 45.07 Geography and Cartography
  - 45.0701 Geography
  - 45.0702 Cartography

- 45.08 History
    - 45.0801 History, General
    - 45.0802 American History(United States)
    - 45.0803 European History
    - 45.0804 History and Philosophy of Science and Technology
    - 45.0805 Public/Applied History and Archival Administration
    - *45.0806 Asian History*
    - *45.0807 Canadian History*
    - 45.0899 History, Other

- 45.09 International Relations and Affairs
    - 45.0901 International Relations and Affairs

- 45.10 Political Science and Government
    - 45.1001 Political Science and Government, General
    - 45.1002 American Government and Politics (United States)
    - *45.1003 Canadian Government and Politics*
    - 45.1099 Political Science and Government, Other

- 45.11 Sociology
    - 45.1101 Sociology

- 45.12 Urban Studies/Affairs
    - 45.1201 Urban Studies/Affairs

- 45.99 Social Sciences and History, Other
    - 45.9999 Social Sciences and History, Other

46. CONSTRUCTION TRADES

- 46.01 Masons and Tile Setters
    - 46.0101 Mason and Tile Setter

- 46.02 Carpenters
    - 46.0201 Carpenter

- 46.03 Electrical and Power Transmission Installers
    - 46.0301 Electrical and Power Transmission Installer, General
    - 46.0302 Electrician
    - 46.0303 Lineworker
    - 46.0399 Electrical and Power Transmission Installer, Other

- 46.04 Construction and Building ~~Finishers~~ *Trades* and Managers
    - 46.0401 Building/Property Maintenance and Manager
    - *46.0402 Concrete Placing and Finishing*
    - 46.0403 Construction/Building Inspector
    - *46.0404 Drywall Installer/Drywaller*
    - *46.0406 Glazier*
    - 46.0408 Painter and Wall Coverer
    - *46.0410 Roofer*
    - *46.0411 Well Driller*
    - *46.0412 Blaster*
    - 46.0499 Construction and Building ~~Finishers~~ *Trades* and Managers, Other

- 46.05 Plumbers, Pipefitters *and Steamfitters*
    - 46.0501 Plumber, Pipefitter, *and Steamfitter*

- 46.99 Construction Trades, Other
    - 46.9999 Construction Trades, Other

47. MECHANICS AND REPAIRERS

- 47.01 Electrical and Electronics Equipment Installers and Repairers
    - 47.0101 Electrical and Electronics Equipment Installer and Repairer, General
    - 47.0102 Business Machine Repairer
    - 47.0103 Communication Systems Installer and Repairer
    - 47.0104 Computer Installer and Repairer
    - 47.0105 Industrial Electronics Installer and Repairer
    - 47.0106 Major Appliance Installer and Repairer
    - *47.0110 Security System Installer and Repairer*
    - 47.0199 Electrical and Electronics Equipment Installer and Repairer, Other

- 47.02 Heating, Air Conditioning and Refrigeration Mechanics and Repairers
    - 47.0201 Heating, Air Conditioning and Refrigeration Mechanic and Repairer

- 47.03 Industrial Equipment Maintenance and Repairers
    - 47.0302 Heavy Equipment Maintenance and Repairer
    - 47.0303 Industrial Machinery Maintenance and Repairer
    - 47.0399 Industrial Equipment Maintenance and Repairers, Other

- 47.04 Miscellaneous Mechanics and Repairers
    - 47.0401 Instrument Calibration and Repairer
    - 47.0402 Gunsmith
    - 47.0403 Locksmith and Safe Repairer
    - 47.0404 Musical Instrument Repairer
    - 47.0408 Watch, Clock and Jewelry Repairer
    - *47.0409 Parts and Warehousing Operations and Maintenance Technology/Technician*
    - 47.0499 Miscellaneous Mechanics and Repairers, Other

- 47.05 Stationary Energy Sources Installers and Operators
    - 47.0501 Stationary Energy Sources Installer and Operators

47.06 Vehicle and Mobile Equipment Mechanics and Repairers
  - **47.0603 Auto/Automotive Body Repairer**
  - **47.0604 Auto/Automotive Mechanic/Technician**
  - **47.0605 Diesel Engine Mechanic and Repairer**
  - **47.0606 Small Engine Mechanic and Repairer**
  - **47.0607 Aircraft Mechanic/Technician, Airframe**
  - **47.0608 Aircraft Mechanic/Technician, Powerplant**
  - **47.0609 Aviation Systems and Avionics Maintenance *Technology*/Technician**
  - **47.0610 Bicycle Mechanic and Repairer**
  - **47.0611 Motorcycle Mechanic and Repairer**
  - ***47.0612 Vehicle Emissions Inspection and Maintenance Technology/Technician***
  - **47.0699 Vehicle and Mobile Equipment Mechanics and Repairers, Other**

47.99 Mechanics and Repairers, Other
  - **47.9999 Mechanics and Repairers, Other**

48. PRECISION PRODUCTION TRADES

48.01 Drafting
  - **48.0101 Drafting, General**
  - **48.0102 Architectural Drafting**
  - **48.0103 Civil/Structural Drafting**
  - **48.0104 Electrical/Electronics Drafting**
  - **48.0105 Mechanical Drafting**
  - **48.0199 Drafting, Other**

48.02 Graphic and Printing Equipment Operators
  - **48.0201 Graphic and Printing Equipment Operator, General**
  - **~~48.0205 Mechanical Typesetter and Composer~~**
  - **48.0206 Lithographer and Platemaker**
  - **48.0208 Printing Press Operator**
  - **48.0211 Computer Typography and Composition Equipment Operator**
  - **48.0212 Desktop Publishing *and Web Page Design Specialist***
  - **48.0299 Graphic and Printing Equipment Operators, Other**

48.03 Leatherworkers and Upholsterers
  - **48.0303 Upholsterer**
  - **48.0304 Shoe, Boot and Leather Repairer**
  - **48.0399 Leatherworkers and Upholsterers, Other**

48.05 Precision Metal Workers
  - **48.0501 Machinist/~~Machine Technologist~~**
  - **48.0503 Machine Shop Assistant**
  - **48.0506 Sheet Metal Worker**
  - **48.0507 Tool and Die Maker/~~Technologist~~**
  - **48.0508 Welder/~~Welding Technologist~~**
  - ***48.0509 Ironworker, Foundry Worker, and Blacksmith***
  - **48.0599 Precision Metal Workers, Other**

- *48.06 Precision Work, Assorted Materials*
  - *48.0605 Millwright*
  - *48.0606 Boilermaker*
  - *48.0699 Precision Work, Assorted Materials, Other*

- 48.07 Woodworkers
  - 48.0701 Woodworkers, General
  - 48.0702 Furniture Designer and Maker
  - 48.0703 Cabinet Maker and Millworker
  - 48.0799 Woodworkers, Other

- 48.99 Precision Production Trades, Other
  - 48.9999 Precision Production Trades, Other

49. TRANSPORTATION AND MATERIALS MOVING WORKERS

- 49.01 Air Transportation Workers
  - 49.0101 Aviation and Airway Science
  - *49.0102 Aircraft Pilot and Navigator, Fixed Wing*
  - 49.0104 Aviation Management
  - 49.0105 Air Traffic Controller
  - 49.0106 Flight Attendant
  - ~~49.0107 Aircraft Pilot (Private~~) (Moved to Chapter V, 36.0119)
  - *49.0108 Aircraft Pilot and Navigator, Rotary Wing*
  - *49.0109 Flight Instructor, Fixed Wing*
  - *49.0110 Flight Instructor, Rotary Wing*
  - *49.0111 Specialist Pilot Ratings (e.g., Multi-Engine, Float, and IFR)*
  - 49.0199 Air Transportation Workers, Other

- 49.02 Vehicle and Equipment Operators
  - 49.0202 Construction Equipment Operator
  - 49.0205 Truck, Bus and Other Commercial Vehicle Operator
  - 49.0299 Vehicle and Equipment Operators, Other

- 49.03 Water Transportation Workers
  - 49.0303 ~~Fishing Technology/~~Commercial Fishing
  - 49.0304 Diver, Professional *and Instructor*
  - 49.0306 Marine Maintenance/*Fitter* and Ship Repairer
  - 49.0309 Marine Science/Merchant Marine Officer
  - 49.0399 Water Transportation Workers, Other

- 49.99 Transportation and Materials Moving Workers, Other
  - 49.9999 Transportation and Materials Moving Workers, Other

50. VISUAL AND PERFORMING ARTS

- 50.01 Visual and Performing Arts
  - 50.0101 Visual and Performing Arts

- 50.02 Crafts, Folk Art and Artisanry
  - 50.0201 Crafts, Folk Art and Artisanry

- 50.03 Dance
  - 50.0301 Dance

- 50.04 Design and Applied Arts
  - 50.0401 Design and Visual Communications
  - 50.0402 Graphic Design, Commercial Art and Illustration
  - 50.0404 Industrial Design
  - 50.0406 Commercial Photography
  - 50.0407 Fashion Design and Illustration
  - 50.0408 Interior Design
  - 50.0499 Design and Applied Arts, Other

- 50.05 Dramatic/Theatre Arts and Stagecraft
  - 50.0501 Drama/Theatre Arts, General
  - 50.0502 Technical Theatre/Theatre Design and Stagecraft
  - 50.0503 Acting and Directing
  - 50.0504 Playwriting and Screenwriting
  - ~~50.0505 Drama/Theatre Literature, History and Criticism~~
  - 50.0599 Dramatic/Theatre Arts and Stagecraft, Other

- 50.06 Film/Video and Photographic Arts
  - 50.0601 Film/Cinema Studies
  - 50.0602 Film-Video Making/Cinematography and Production

  - 50.0605 Photography
  - *50.0607 Animation, Video Graphics and Special Effects*
  - 50.0699 Film/Video and Photographic Arts, Other

- 50.07 Fine Arts and Art Studies
  - 50.0701 Art, General
  - 50.0702 Fine/Studio Arts
  - 50.0703 Art History, Criticism and Conservation
  - 50.0704 Arts Management
  - 50.0705 Drawing
  - 50.0706 Intermedia/Multimedia
  - 50.0708 Painting
  - 50.0709 Sculpture
  - 50.0710 Printmaking
  - 50.0711 Ceramics Arts and Ceramics
  - 50.0712 Fiber, Textile and Weaving Arts
  - 50.0713 Metal and Jewelry Arts
  - 50.0799 Fine Arts and Art Studies, Other

- 50.09 Music
  - 50.0901 Music, General
  - 50.0902 Music History and Literature
  - 50.0903 Music – General Performance
  - 50.0904 Music – Theory and Composition
  - 50.0905 Musicology and Ethnomusicology
  - 50.0906 Music – Conducting
  - 50.0907 Music – Piano and Organ Performance
  - 50.0908 Music – Voice and Choral/Opera Performance
  - 50.0909 Music Business Management and Merchandising
  - *50.0910 Jazz Studies*
  - *50.0911 Music – Stringed Instrument Performance*
  - *50.0912 Music – Brass Instrument Performance*
  - *50.0913 Music – Woodwind Instrument Performance*
  - *50.0914 Music – Percussion Instrument Performance*
  - 50.0999 Music, Other

- 50.99 Visual and Performing Arts, Other
  - 50.9999 Visual and Performing Arts, Other

51. HEALTH PROFESSIONS AND RELATED SCIENCES

- 51.01 Chiropractic (D.C., D.C.M.)
  - 51.0101 Chiropractic (D.C., D.C.M.)

- 51.02 Communication Disorders Sciences and Services
  - 51.0201 Communication Disorders, General
  - 51.0202 Audiology/Hearing Sciences
  - 51.0203 Speech-Language Pathology
  - 51.0204 Speech Pathology and Audiology
  - 51.0205 Sign Language Interpreter
  - 51.0299 Communication Disorders Sciences and Services, Other

- 51.03 Community Health Services
  - 51.0301 Community Health Services

- 51.04 Dentistry (DDS, D.M.D.)
  - 51.0401 Dentistry (DDS, D.M.D.)

- 51.05 Dental Clinical Sciences/Graduate Dentistry (MS, Ph.D.)
  - 51.0501 Dental Clinical Sciences/Graduate Dentistry (MS, Ph.D.)

- 51.06 Dental Services
  - 51.0601 Dental Assistant
  - 51.0602 Dental Hygienist
  - 51.0603 Dental Laboratory Technician
  - 51.0699 Dental Services, Other

- 51.07 Health and Medical Administrative Services
  - 51.0701 Health System/Health Services Administration
  - 51.0702 Hospital/Health Facilities Administration
  - 51.0703 Health Unit Coordinator/Ward Clerk
  - 51.0704 Health Unit Manager/Ward Supervisor
  - 51.0705 Medical Office Management
  - 51.0706 Medical Records Administration
  - 51.0707 Medical Records Technology/Technician
  - 51.0708 Medical Transcription
  - 51.0799 Health and Medical Administrative Services, Other

- 51.08 Health and Medical Assistants
  - 51.0801 Medical Assistant
  - 51.0802 Medical Laboratory Assistant
  - 51.0803 Occupational Therapy Assistant
  - ~~51.0804 Ophthalmic Medical Assistant~~
  - 51.0805 Pharmacy Technician/Assistant
  - 51.0806 Physical Therapy Assistant
  - 51.0807 Physician Assistant
  - 51.0808 Veterinarian Assistant~~/Animal Health Technician~~
  - 51.0899 Health and Medical Assistants, Other

- 51.09 Health and Medical Diagnostic and Treatment Services *Technologies/Technicians*
  - 51.0901 Cardiovascular Technology/Technician
  - 51.0902 Electrocardiograph Technology/Technician
  - 51.0903 Electroencephalograph Technology/Technician
  - 51.0904 Emergency Medical Technology/Technician
  - 51.0905 Nuclear Medical Technology/Technician
  - 51.0906 Perfusion Technology/Technician
  - 51.0907 Medical Radiologic Technology/Technician
  - 51.0908 Respiratory Therapy Technician
  - 51.0909 Surgical/Operating Room Technician
  - 51.0910 Diagnostic Medical Sonography
  - *51.0911 Electroneurophysiology Technology/Technician*
  - *51.0912 Magnetic Resonance Imaging Technology/Technician*
  - 51.0999 Health and Medical Diagnostic and Treatment Services *Technologies/Technicians*, Other

- 51.10 Health and Medical Laboratory Technologies*/Technicians*
  - 51.1001 Blood Bank Technology/Technician
  - 51.1002 Cytotechnologist
  - 51.1003 Hematology Technology/Technician
  - 51.1004 Medical Laboratory Technician
  - 51.1005 Medical Technology
  - 51.1006 Optometric/~~Ophthalmic~~ Laboratory Technician
  - 51.1099 Health and Medical Laboratory Technologies/Technicians, Other

- 51.11 Health and Medical Preparatory Programs
  - 51.1101 Pre-Dentistry Studies
  - 51.1102 Pre-Medicine Studies
  - 51.1103 Pre-Pharmacy Studies
  - 51.1104 Pre-Veterinary Studies
  - *51.1105 Pre-Nursing Studies*
  - 51.1199 Health and Medical Preparatory Programs, Other

- 51.12 Medicine (M.D.)
  - 51.1201 Medicine (M.D.)

- 51.13 Medical Basic Sciences
  - 51.1301 Medical Anatomy
  - 51.1302 Medical Biochemistry
  - 51.1303 Medical Biomathematics and Biometrics
  - 51.1304 Medical Physics/Biophysics
  - 51.1305 Medical Cell Biology
  - 51.1306 Medical Genetics
  - 51.1307 Medical Immunology
  - 51.1308 Medical Microbiology
  - 51.1309 Medical Molecular Biology
  - 51.1310 Medical Neurobiology
  - 51.1311 Medical Nutrition
  - 51.1312 Medical Pathology
  - 51.1313 Medical Physiology
  - 51.1314 Medical Toxicology
  - 51.1399 Medical Basic Sciences, Other

- 51.14 Medical Clinical Sciences (MS, Ph.D.)
  - 51.1401 Medical Clinical Sciences (MS, Ph.D.)

- 51.15 Mental Health Services
  - 51.1501 Alcohol/Drug Abuse Counseling
  - 51.1502 Psychiatric/Mental Health Services Technician
  - 51.1503 Clinical and Medical Social Work
  - 51.1599 Mental Health Services, Other

- 51.16 Nursing
  - 51.1601 Nursing (R.N. Training, e.g., Diploma, A.S.N., B.S.N., MSN)
  - 51.1602 Nursing Administration (Post-R.N.)
  - 51.1603 Nursing, Adult Health (Post-R.N.)
  - 51.1604 Nursing Anesthetist (Post-R.N.)
  - 51.1605 Nursing ~~Family Practice~~ Practitioner (Post-R.N.)
  - 51.1606 Nursing, Maternal/Child Health (Post-R.N.)
  - 51.1607 Nursing Midwifery (Post-R.N.)
  - 51.1608 Nursing Science (MS, Ph.D.)
  - 51.1609 Nursing, Pediatric (Post-R.N.)
  - 51.1610 Nursing, Psychiatric/Mental Health (Post-R.N.)
  - 51.1611 Nursing, *Community*/Public Health (Post-R.N.)
  - 51.1612 Nursing, Surgical (Post-R.N.)
  - 51.1613 Practical Nurse (L.P.N. Training)

51.1614 Nurse Assistant/Aide
~~51.1615 Home Health Aide~~ (Moved to 51.2602)
51.1616 Nursing Educator (Post R.N.)
51.1617 Nursing, Clinical Specialist (Post R.N.)
51.1618 Nursing, Critical Care (Post R.N.)
51.1619 Nursing, Occupational Health (Post R.N.)
51.1620 Nursing, Pre-Operative (Post R.N.)
51.1621 Nursing, Gerontology (Post R.N.)
51.1699 Nursing, Other

51.17 Optometry (OD)
51.1701 Optometry (OD)

51.18 ~~Ophthalmic~~/Optometric Services
51.1801 Opticianry/Dispensing Optician
51.1802 Optical Technician/Assistant
~~51.1803 Ophthalmic Medical Technologist~~
51.1804 Orthoptics
51.1899 ~~Ophthalmic~~/Optometric Services, Other

51.19 Osteopathic Medicine (DO)
51.1901 Osteopathic Medicine (DO)

51.20 Pharmacy
51.2001 Pharmacy (PharmD.)
51.2002 Pharmacy Administration and Pharmaceutics
51.2003 Medical Pharmacology and Pharmaceutical Sciences
51.2099 Pharmacy, Other

51.21 Podiatry (D.P.M., DP, Pod.D.)
51.2101 Podiatry (D.P.M., DP, Pod.D.)

51.22 Public Health
51.2201 Public Health, General
51.2202 Environmental Health
51.2203 Epidemiology
51.2204 Health and Medical Biostatistics
51.2205 Health Physics/Radiologic Health
51.2206 Occupational Health and Industrial Hygiene
51.2207 Public Health Education and Promotion
51.2299 Public Health, Other

51.23 Rehabilitation/Therapeutic Services
51.2301 Art Therapy
51.2302 Dance Therapy
51.2303 Hypnotherapy
51.2304 Movement Therapy
51.2305 Music Therapy
51.2306 Occupational Therapy
51.2307 Orthotics/Prosthetics
51.2308 Physical Therapy

- 51.2309 Recreational Therapy
- 51.2310 Vocational Rehabilitation Counseling
- *51.2311 Massage Therapy/Therapeutic Massage*
- 51.2399 Rehabilitation/Therapeutic Services, Other

- 51.24 Veterinary Medicine (D.V.M.)
  - 51.2401 Veterinary Medicine (D.V.M.)

- 51.25 Veterinary Clinical Sciences (MS, Ph.D.)
  - 51.2501 Veterinary Clinical Sciences (MS, Ph.D.)

- 51.26 Miscellaneous Health Aides
  - *51.2601 Institutional Health Aide*
  - 51.2602 Home Health Aide
  - *51.2603 Personal Care Attendant*
  - *51.2699 Miscellaneous Health Aids, Other*

- 51.27 Miscellaneous Health Sciences and Allied Health Services
  - 51.2701 Acupuncture and Oriental Medicine *(AOM)*
  - 51.2702 Medical Dietician
  - 51.2703 Medical Illustrating
  - 51.2704 Naturopathic and Homeopathic Medicine
  - 51.2705 Psychoanalysis
  - *51.2706 Traditional Healing Arts, Other than AOM*
  - *51.2799 Miscellaneous Health Sciences and Allied Health Services, Other*

- 51.99 Health Professions and Related Sciences, Other
  - 51.9999 Health Professions and Related Sciences, Other

52. BUSINESS MANAGEMENT AND ADMINISTRATIVE SERVICES

- 52.01 Business
  - 52.0101 Business, General

- 52.02 Business Administration and Management
  - 52.0201 Business Administration and Management, General
  - 52.0202 Purchasing, Procurement and Contracts Management
  - 52.0203 Logistics and Materials Management
  - 52.0204 Office Supervision and Management
  - 52.0205 Operations Management and Supervision
  - 52.0206 Non-Profit and Public Management
  - 52.0299 Business Administration and Management, Other

- 52.03 Accounting
  - 52.0301 Accounting
  - 52.0302 Accounting Technician
  - 52.0399 Accounting, Other

- 52.04 Administrative and Secretarial Services
  - 52.0401 Administrative Assistant/Secretarial Science, General
  - 52.0402 Executive Assistant/Secretary
  - 52.0403 Legal Administrative Assistant/Secretary
  - 52.0404 Medical Administrative Assistant/Secretary
  - 52.0405 Court Reporter
  - 52.0406 Receptionist *and Call Center/ Teleservice Operation*
  - 52.0407 Information Processing/Data Entry Technician
  - 52.0408 General Office/Clerical and Typing Services
  - *52.0413 Parts, Warehousing and Inventory Management Operations*
  - *52.0414 Traffic, Customs, and Transportation Clerk/Technician*
  - 52.0499 Administrative and Secretarial Services, Other

- 52.05 Business Communications
  - 52.0501 Business Communications

- 52.06 Business/Managerial Economics
  - 52.0601 Business/Managerial Economics

- 52.07 Enterprise Management and Operation
  - 52.0701 Enterprise Management and Operation, General
  - 52.0702 Franchise Operation
  - 52.0799 Enterprise Management and Operation, Other

- 52.08 Financial Management and Services
  - 52.0801 Finance, General
  - 52.0802 Actuarial Science
  - 52.0803 Banking and Financial Support Services
  - 52.0804 Financial Planning
  - 52.0805 Insurance and Risk Management
  - 52.0806 International Finance
  - 52.0807 Investments and Securities
  - 52.0808 Public Finance
  - 52.0899 Financial Management and Services, Other

- 52.09 Hospitality Services Management
  - 52.0901 Hospitality/Administration Management
  - 52.0902 Hotel/Motel and Restaurant Management
  - 52.0903 Travel-Tourism Management
  - 52.0999 Hospitality Services Management, Other

- 52.10 Human Resources Management
  - 52.1001 Human Resources Management
  - 52.1002 Labor/Personnel Relations and Studies
  - 52.1003 Organizational Behavior Studies
  - 52.1099 Human Resources Management, Other

- 52.11 International Business
  - 52.1101 International Business

- **52.12 ~~Business~~ *Management* Information *Systems and Business* Data Processing Services**
    - **52.1201 ~~Business~~ *Management* Information *Systems and Business* Data Processing Services, General**
    - **52.1202 Business Computer Programming/Programmer**
    - **52.1203 Business Systems Analysis and Design**
    - **52.1204 Business Systems Networking *(LAN/WAN)* and Telecommunications**
    - **52.1205 Business Computer Facilities Operator**
    - **52.1299 ~~Business~~ *Management* Information *Systems and Business* Data Processing Services, Other**

- **52.13 Business Quantitative Methods and Management Science**
    - **52.1301 Management Science**
    - **52.1302 Business Statistics**
    - **52.1399 Business Quantitative Methods and Management Science, Other**

- **52.14 Marketing Management and Research**
    - **52.1401 Business Marketing and Marketing Management**
    - **52.1402 Marketing Research**
    - **52.1403 International Business Marketing**
    - **52.1499 Marketing Management and Research, Other**

- **52.15 Real Estate**
    - **52.1501 Real Estate**

- **52.16 Taxation**
    - **52.1601 Taxation**

- **52.99 Business Management and Administrative Services, Other**
    - **52.9999 Business Management and Administrative Services, Other**

CHAPTER II: *VOCATIONAL FAMILY AND CONSUMER SCIENCES*/CONSUMER AND HOMEMAKING EDUCATION PROGRAMS

- **20.01 *Vocational Family and Consumer Sciences*/Consumer and Homemaking Education**
  - **20.0101 *Vocational Family and Consumer Sciences*/Consumer and Homemaking Education**
  - **20.0102 *Human Development*/Child Development, Care and Guidance**
  - **20.0103 *Textiles and Apparel*/Clothing and Textiles**
  - **20.0104 *Consumer and Family Resources*/Consumer Education**
  - **20.0105 *Exploratory Occupational Family and Consumer Sciences*/Exploratory Homemaking**
  - **20.0106 *Nutrition and Wellness*/Family/Individual Health**
  - **20.0107 *Parenting, Interpersonal Relations and Family*/Family Living and Parenthood**
  - **20.0108 *Foods, Dietetics and Nutrition*/Foods and Nutrition**
  - **20.0109 *Consumer and Family Resources Management*/Home Management**
  - **20.0110 *Housing, Interiors and Furnishings*/Housing, Home Furnishings, and Equipment**
  - **20.0199 *Vocational Family and Consumer Sciences*/Consumer and Homemaking Education, Other**

CHAPTER III: TECHNOLOGY EDUCATION/INDUSTRIAL ARTS

21. TECHNOLOGY EDUCATION/INDUSTRIAL ARTS

- **21.01 Technology Education/Industrial Arts**
  - **21.0101 Technology Education/Industrial Arts**

CHAPTER IV: UNITED STATES RESERVE OFFICERS' TRAINING CORPS PROGRAMS

28. UNITED STATES RESERVE OFFICERS' TRAINING CORPS (R.O.T.C.)

- **28.01 Air Force R.O.T.C.**
  - **28.0101 Air Force R.O.T.C./Air Science**

- **28.03 Army R.O.T.C.**
  - **28.0301 Army R.O.T.C./Military Science**

- **28.04 Navy/Marine Corps R.O.T.C.**
  - **28.0401 Navy/Marine Corps R.O.T.C./Naval Science**

CHAPTER V: PERSONAL IMPROVEMENT AND LEISURE PROGRAMS

32. BASIC SKILLS

- 32.01 Basic Skills
    - 32.0101 Basic Skills, General
    - 32.0103 Literacy and Communication Skills
    - 32.0104 Numeracy and Computational Skills
    - 32.0105 Job Seeking/Changing Skills
    - 32.0107 Career Exploration/Awareness Skills
    - *32.0112 Second Language Learning*
    - 32.0199 Basic Skills, Other

33. CITIZENSHIP ACTIVITIES

- 33.01 Citizenship Activities
    - 33.0101 Citizenship Activities, General
    - 33.0102 U.S. Citizenship Education
    - 33.0103 Community Awareness
    - 33.0104 Community Involvement
    - *33.0105 Canadian Citizenship Education*
    - 33.0199 Citizenship Activities, Other

34. HEALTH-RELATED KNOWLEDGE AND SKILLS

- 34.01 Health-Related Knowledge and Skills
    - 34.0102 Birthing and Parenting Knowledge and Skills
    - 34.0103 Personal Health Improvement and Maintenance
    - 34.0104 Addiction Prevention and Treatment
    - 34.0199 Health-Related Knowledge and Skills, Other

35. INTERPERSONAL AND SOCIAL SKILLS

- 35.01 Interpersonal and Social Skills
    - 35.0101 Interpersonal and Social Skills, General
    - 35.0102 Interpersonal Relationships Skills
    - 35.0103 Business and Social Skills
    - 35.0199 Interpersonal and Social Skills, Other

36. LEISURE AND RECREATIONAL ACTIVITIES

- 36.01 Leisure and Recreational Activities
  - 36.0101 Leisure and Recreational Activities, General
  - 36.0102 Handicrafts and Model-Making
  - 36.0103 Board, Card and Role-Playing Games
  - 36.0105 Home Maintenance and Improvement
  - 36.0106 Nature Appreciation
  - 36.0107 Pet Ownership and Care
  - 36.0108 Sports and Exercise
  - 36.0109 Travel and Exploration
  - 36.0110 Art
  - 36.0111 Collecting
  - 36.0112 Cooking and Other Domestic Skills
  - 36.0113 Computer Games and Programming Skills
  - 36.0114 Dancing
  - 36.0115 Music
  - 36.0116 Reading
  - 36.0117 Theatre
  - 36.0118 Writing
  - 36.0119 Aircraft Pilot (Private)
  - 36.0199 Leisure and Recreational Activities, Other

37. PERSONAL AWARENESS AND SELF-IMPROVEMENT

- 37.01 Personal Awareness and Self-Improvement
  - 37.0101 Self-Awareness and Personal Assessment
  - 37.0102 Stress Management and Coping Skills
  - 37.0103 Personal Decision-Making Skills
  - 37.0104 Self-Esteem and Values Clarification
  - 37.0199 Personal Awareness and Self-Improvement, Other

CHAPTER VI: DENTAL, MEDICAL AND VETERINARY RESIDENCY PROGRAMS

- 51.28 Dental Residency Programs
  - 51.2801 Dental/Oral Surgery Specialty
  - 51.2802 Dental Public Health Specialty
  - 51.2803 Endodontics Specialty
  - 51.2804 Oral Pathology Specialty
  - 51.2805 Orthodontics Specialty
  - 51.2806 Pedodontics Specialty
  - 51.2807 Periodontics Specialty
  - 51.2808 Prosthodontics Specialty
  - 51.2899 Dental Residency Programs, Other

- 51.29 Medical Residency Programs
  - 51.2901 Aerospace Medicine Residency
  - 51.2902 Allergies and Immunology Residency
  - 51.2903 Anesthesiology Residency
  - 51.2904 Blood Banking Residency
  - 51.2905 Cardiology Residency
  - 51.2906 Chemical Pathology Residency
  - 51.2907 Child/Pediatric Neurology Residency
  - 51.2908 Child Psychiatry Residency
  - 51.2909 Colon and Rectal Surgery Residency
  - 51.2910 Critical Care Anesthesiology Residency
  - 51.2911 Critical Care Medicine Residency
  - 51.2912 Critical Care Surgery Residency
  - 51.2913 Dermatology Residency
  - 51.2914 Dermatopathology Residency
  - 51.2915 Diagnostic Radiology Residency
  - 51.2916 Emergency Medicine Residency
  - 51.2917 Endocrinology and Metabolism Residency
  - 51.2918 Family Medicine Residency
  - 51.2919 Forensic Pathology Residency
  - 51.2920 Gastroenterology Residency
  - 51.2921 General Surgery Residency
  - 51.2922 Geriatric Medicine Residency
  - 51.2923 Hand Surgery Residency
  - 51.2924 Hematology Residency
  - 51.2925 Hematological Pathology Residency
  - 51.2926 Immunopathology Residency
  - 51.2927 Infectious Disease Residency
  - 51.2928 Internal Medicine Residency
  - 51.2929 Laboratory Medicine Residency
  - 51.2930 Musculoskeletal Oncology Residency
  - 51.2931 Neonatal-Perinatal Medicine Residency
  - 51.2932 Nephrology Residency
  - 51.2933 Neurological Surgery/Neurosurgery Residency
  - 51.2934 Neurology Residency
  - 51.2935 Neuropathology Residency
  - 51.2936 Nuclear Medicine Residency
  - 51.2937 Nuclear Radiology Residency
  - 51.2938 Obstetrics and Gynecology Residency
  - 51.2939 Occupational Medicine Residency
  - 51.2940 Oncology Residency
  - 51.2941 Ophthalmology Residency
  - 51.2942 Orthopedics/Orthopedic Surgery Residency
  - 51.2943 Otolaryngology Residency
  - 51.2944 Pathology Residency
  - 51.2945 Pediatric Cardiology Residency
  - 51.2946 Pediatric Endocrinology Residency
  - 51.2947 Pediatric Hemato-Oncology Residency
  - 51.2948 Pediatric Nephrology Residency
  - 51.2949 Pediatric Orthopedics Residency
  - 51.2950 Pediatric Surgery Residency

- **51.2951 Pediatrics Residency**
- **51.2952 Physical and Rehabilitation Medicine Residency**
- **51.2953 Plastic Surgery Residency**
- **51.2954 Preventive Medicine Residency**
- **51.2955 Psychiatry Residency**
- **51.2956 Public Health Medicine Residency**
- **51.2957 Pulmonary Disease Residency**
- **51.2958 Radiation Oncology Residency**
- **51.2959 Radioisotopic Pathology Residency**
- **51.2960 Rheumatology Residency**
- **51.2961 Sports Medicine Residency**
- **51.2962 Thoracic Surgery Residency**
- **51.2963 Urology Residency**
- **51.2964 Vascular Surgery Residency**
- ***51.2965 Adult Reconstructive Orthopedics (Orthopedic Surgery)***
- ***51.2966 Chemical Pathology Residency***
- ***51.2967 Child Neurology Residency***
- ***51.2968 Cytopathology Residency***
- ***51.2969 Diagnostic Laboratory Immunology Residency***
- ***51.2970 Geriatric Medicine Residency (Internal Medicine)***
- ***51.2971 Pediatrics Urology***
- ***51.2972 Physical and Rehabilitation Medicine Residency***
- ***51.2973 Preventive Medicine Residency – Public Health***
- ***51.2974 Transitional Year Residency***
- ***51.2975 Spinal Surgery Residency (Orthopedic Surgery)***
- **51.2999 Medical Residency Programs, Other**

- **51.30 Veterinary Residency Programs**
  - **51.3001 Veterinary Anesthesiology**
  - **51.3002 Veterinary Dentistry**
  - **51.3003 Veterinary Dermatology**
  - **51.3004 Veterinary Emergency and Critical Care Medicine**
  - **51.3005 Veterinary Internal Medicine**
  - **51.3006 Laboratory Animal Medicine**
  - **51.3007 Veterinary Microbiology**
  - **51.3008 Veterinary Nutrition**
  - **51.3009 Veterinary Ophthalmology**
  - **51.3010 Veterinary Pathology**
  - **51.3011 Veterinary Practice**
  - **51.3012 Veterinary Preventive Medicine**
  - **51.3013 Veterinary Radiology**
  - **51.3014 Veterinary Surgery**
  - **51.3015 Theriogenology**
  - **51.3016 Veterinary Toxicology**
  - **51.3017 Zoological Medicine**
  - **51.3099 Veterinary Residency Programs, Other**

CHAPTER VII: HIGH SCHOOL/SECONDARY DIPLOMAS AND CERTIFICATES PROGRAMS

53. HIGH SCHOOL/SECONDARY DIPLOMAS AND CERTIFICATES

53.01 High School/Secondary Diplomas
- 53.0101 Regular/*General* High School Diploma *and Secondary/Senior High School Graduation/Completion Diploma/Certificate; Grade 12/Division IV Standing (Saskatchewan)*
- 53.0102 College/*University* Preparatory *and Advanced* High School/*Secondary School* Diploma; *Diplôme d'études secondaires-Enseignement général (DES-EG)*
- 53.0103 Vocational High School Diploma *and Secondary Business/Vocational-Industrial/Occupational Diploma; Diplôme d'études secondaires-Enseignement professionnel (DES-EP)*
- 53.0104 Honors/Regents High School Diploma *and Provincial Graduation Certificate*
- 53.0199 High School/Secondary Diplomas, Other

53.02 High School/Secondary Certificates
- 53.0201 High School Equivalence Certificate *and Adult Secondary School Diploma*
- 53.0202 High School Certificate of Competence *and Provincial Certificate of Education*
- 53.0203 Certificate of IEP Completion
- 53.0299 High School/Secondary Certificates, Other

CHAPTER VIII: FRENCH (CANADIAN) LANGUAGE AND LITERATURE/LETTERS LANGUE et LITTÉRATURES FRANÇAISES/LETTRES

NOTE: The codes in Series 54. are for the exclusive use of Statistics Canada in collecting data on Canadian programs in French that correspond to English programs such as are listed under Series 23 for native speakers of the language. French is one of two national languages in Canada.. The use of Series 54. codes in the United States is inappropriate. Programs in the study of French as a foreign language or to learn to teach it in school settings should be reported under Series 13. or 16. as appropriate.

54. LANGUE et LITTÉRATURES FRANÇAISES/LETTRES.

54.01 Langue et littérature française, général
- *54.0101 Langue et littérature française, général*

54.02 Littérature comparative
- *54.0201 Littérature comparative*

54.03 Composition française
- *54.0301 Composition française*

54.04 Écriture créative en française
54.0401 Écriture créative en française

54.05 Littérature Canadienne française.
54.0501 Littérature Canadienne française

54.06 Littérature françaises (France et la Communauté français)
54.0601 Littérature françaises (France et la Communauté française)

54.07 Discours et rhétorique
54.0701 Discours et rhétorique

54.08 Rédaction technique et commercielle en français
54.0801 Rédaction technique et commercielle en français

54.99 Langue et Littérature Française, Autres
54.9999 Langue et Littérature Française, Autres

FULL TEXT OF INSTRUCTIONAL PROGRAM CODES, TITLES, AND DEFINITIONS

How to Read this Section

The following section presents the comprehensive list of program codes, titles, and descriptions to be included in the CIP-2000. A synopsis of the organizational structure and conventions used to present the program information follows. A more detailed coverage of these issues is provided in the *Introduction*.

Organizational Structure: the instructional programs presented in this CIP are organized on 3 levels: 1) a 2-digit Series, 2) a 4-digit Series, and 3) a 6-digit code level. The organizational structure used is based on historic convention.

Two-digit Series: all instructional programs are aggregated to a 2-digit Series level that represents logical groupings of comparable and related programs. The 2-digit Series numbering format consists of a 2-digit number followed by a period (*Examples*: 01., 02., 05., 51.). Program titles at this level appear in **boldface type** and in all **CAPITAL LETTERS**.

Four-digit Series: 4-digit Series represent an intermediate aggregation of programs that summarizes groups of instructional program(s) based on comparable program content and objectives. The numbering sequence for the 4-digit Series consists of the associated 2-digit Series number followed by a period and an assigned 2-digit number that is uniquely associated with that 4 digit Series (*Examples*: 02.01, 02.02, 02.99). Program titles at the 4-digit Series level appear in **boldface type** in initial capitals. Some program titles appear in ***bold italics***, indicating that the program is new or modified.

Six-digit Codes: each 6-digit code represents a single instructional program. There is at least one 6-digit code within every 4-digit Series. The numbering sequence is similar to the 4-digit Series sequence, with two more digits added after the 4-digit Series number. The standard format for the 6-digit codes is XX.XXXX (*Examples*: 01.0101, 02.0101, 16.0501). Program titles for the 6-digit codes appear in **bold type** in Initial Capitals; some appear in ***bold italics*** indicating the program is new or modified.

Standard Conventions Used:
Standard formats and conventions are used to indicate the intended purposes and applications of the information. A synopsis of those conventions follow.

Strikethroughs indicate that a program code or Series, or all or part of a program title or definition has been deleted. (*Example*: ~~**03.0405 [Logging/Timber Harvesting]** An instructional program that prepares individuals .....~~). Brackets indicate that the entire title is deleted or moved.

Bold Italics indicate that a program code, or all or part of a program title or definition has been added or modified (*Examples*: ***14.35 Manufacturing Engineering, 51.2965 Adult Reconstructive Orthopedics (Orthopedic Surgery)***).

Multiple Program Titles separated by slashes ("/") indicate that two or more interchangeable titles are in use for this program. In such cases, the most commonly used title appears first.
(*Example*: 43.0103 **Criminal Justice/Law Enforcement Administration**.)

Program Descriptions generally identify the objectives and content of the instructional programs. Program descriptions that contain the phrase "An instructional program that prepares individuals for....", or the phrase "generally prepares individuals" within the description indicate that the program objectives are designed to prepare individuals for "occupationally-specific employment" upon completion. Program descriptions for academic or general programs begin with the phrase "An instructional program that describes...". These programs have no specific instructional objectives to provide occupational preparation. Any program description that appears in bold italics indicates that it is new (added). Program descriptions with part or all of the text struckthrough means it is proposed for deletion.

NCES recognizes that many of the program definitions/descriptions included in this version of the CIP are seriously outdated, often due to technology enhancements or business practice changes. We are seeking updates and refinements, where applicable and appropriate.

Cross-references refer the user to related code located elsewhere within the CIP. They appear in the text as *"(Refer to...)"* and contain the precise number of the referenced Series or code(s) (*Example:* **BUSINESS MANAGEMENT AND ADMINISTRATIVE SERVICES** (Refer to 52. Series)). A cross-reference may be made to another 6-digit code, or to a 4-digit Series or 2-digit Series. Within the text, these references are preceded by 6 dashes (------) in the spaces that normally occupy the 6-digit program code.

Moves indicate that a code or Series that occupied a location in the 1990 CIP has been proposed to be moved to a new location within CIP-2000. The number, title, and definition are struckthrough. After the definition, a parenthetical statement "*(Moved to...)*" is indicated and notes the precise location that the code or Series is proposed to occupy in CIP-2000 (*Example*: 13.08 [~~**Educational Psychology**~~]. (Moved to 42.18)).

Crosswalks/"Deleted Included Under" indicates that a 1990 code or Series has been deleted as a separate entry but was combined with another code or Series that continues to exist. Titles and definitions are struckthrough and titles are bracketed. (*Example*: ~~03.0203 **[Natural Resources Law Enforcement and Protective Services]**, An instructional program that prepares...~~ Deleted, included under 43.0107).

Simple Deletions are codes or Series that have a notation that simply says *"Deleted"* with no numerical reference to another code. It indicates that the program code or Series has been completely deleted since the 1990 CIP. (*Example:* ~~26.0499~~ [~~**Cell and Molecular Biology, Other**~~] (Deleted))

CHAPTER I

ACADEMIC AND OCCUPATIONALLY-SPECIFIC PROGRAMS

Note: The Series in this chapter refer to instructional programs that are offered in specific fields of study at the secondary and postsecondary levels. All of the programs included in this chapter are offered for full academic credit and lead to specific awards, including degrees, diplomas and certificates.

01. **AGRICULTURAL BUSINESS AND PRODUCTION.** A summary of groups of instructional programs that prepare individuals to apply scientific knowledge, methods, and techniques to agricultural business and production.

01.01 **Agricultural Business and Management.** (See 01.0101)

------ **Business Administration and Management**. (Refer to 52.02 Series)

01.0101 **Agricultural Business and Management, General.** An instructional program that generally prepares individuals to apply modern economic and business principles involved in the organization, operation and management of farm and agricultural businesses.

01.0102 **Agricultural Business/Agribusiness Operations.** An instructional program that prepares individuals to apply modern business and economic principles relating to the production and marketing of agricultural products and services.

01.0103 **Agricultural Economics**. An instructional program that describes modern business and economic principles relating to the allocation of resources in the production and marketing of agricultural products and services in the domestic and international markets.

------ **Economics.** (Refer to 45.06 Series)

01.0104 **Farm and Ranch Management**. An instructional program that prepares individuals to manage a farm or ranch. Includes instruction in computer-assisted management analysis, accounting, taxes, production, financing, capital resources, purchasing, government programs, farm inputs, performance records, contracts, estate planning and marketing.

01.0199 **Agricultural Business and Management, Other**. Any instructional program in agricultural business and management not described above.

01.02 **Agricultural Mechanization**. (See 01.0201)

01.0201 **Agricultural Mechanization, General**. An instructional program that prepares individuals in a general way to sell, select and service agriculture or agribusiness technical equipment and facilities, including computers, specialized software, power units, machinery, equipment, structures and utilities. Includes instruction in agricultural power units; the planning and selection of materials for the construction of agricultural facilities; the mechanical practices associated with irrigation and water conservation; erosion control; and data processing systems.

01.0204 **Agricultural Power Machinery Operator**. An instructional program that prepares individuals to install, operate, service, maintain, and repair various agricultural power units, vehicles, machinery and equipment. Includes instruction in gas, diesel, and electric power units; welding; refrigeration; and hydraulic systems.

01.0299 **Agricultural Mechanization, Other**. Any instructional program in agricultural mechanization not described above.

01.03 **Agricultural Production/Workers and Managers**. (See 01.0301).

01.0301 **Agricultural Production Workers and Managers, General**. An instructional program that generally prepares individuals to plan and economically use facilities, natural resources, labor and capital in the production of plant and animal products.

01.0302 **Agricultural Animal Husbandry and Production Management.** An instructional program that prepares individuals to select, breed, care for and market livestock and small farm animals. Includes instruction in the operation of animal production enterprises.

01.0303 **Aquaculture Operations and Production Management**. An instructional program that prepares individuals to select, culture, propagate, harvest and market domesticated fish, shellfish and marine plants. Includes instruction in the operation of fish farms and related enterprises.

------ **Fishing and Fisheries Management and Sciences.** (Refer to 03.0301)

01.0304 **Crop Production Operations and Management**. An instructional program that prepares individuals to operate enterprises producing cereal grain, fiber, forage, oilseed, tree fruits and nuts, small fruits, vegetables and other plant products. Includes instruction in soils, plant nutrition, plant diseases, pest management, harvesting and marketing.

01.0399 **Agricultural Production Workers and Managers, Other**. Any instructional program in agricultural production not described above.

01.04 **Agricultural and Food Products Processing**. (See 01.0401)

01.0401 **Agricultural and Food Products Processing Operations and Management**. An instructional program that prepares individuals to receive, inspect, store and process agricultural food or products preparatory to marketing. Includes instruction in the characteristics and properties of agricultural products, and processing and storage techniques.

01.05 **Agricultural Supplies and Related Services**. (See 01.0501-01.0599)

01.0501 **Agricultural Supplies Retailing and Wholesaling**. An instructional program that generally prepares individuals to sell supplies for agricultural production provides agricultural services and purchase and market agricultural products.

01.0505 **Animal Trainer**. An instructional program that prepares individuals to teach animals to obey commands: perform services; perform in sports and leisure activities; provide security; assist in law enforcement; assist in search and rescue operations or perform entertainment tricks.

01.0507 **Equestrian/Equine Studies, Horse Management and Training**. An instructional program that prepares individuals to care for horses and horse equipment; to train horses for various work and athletic or entertainment roles; to ride horses; and to manage horse training, breeding and housing programs and facilities.

01.0599 **Agricultural Supplies and Related Services, Other**. Any instructional program in agricultural supplies and support services not described above.

01.06.**Horticulture Services Operations and Management**. (See 01.0601)

01.0601 **Horticulture Services Operations and Management, General**. An instructional program that generally prepares individuals to produce, process and market plants, shrubs and trees used principally for ornamental, recreational and aesthetic purposes and to establish, maintain, and manage horticultural enterprises.

------ **Horticulture Science**. (Refer to 02.0403)

01.0603 **Ornamental Horticulture Operations and Management**. An instructional program that prepares individuals to produce flowers, foliage, and related plant materials in fields and greenhouses for ornamental purposes, and to arrange, package and market these materials. Includes instruction in enterprise management.

01.0604 **Greenhouse Operations and Management**. An instructional program that prepares individuals to produce commercial plant species in controlled environments, and to manage commercial and experimental greenhouse operations.

01.0605 **Landscaping Operations and Management**. An instructional program that prepares individuals to procure, plant and maintain grounds and indoor and outdoor ornamental plants. Includes instruction in equipment maintenance and facilities management.

------ **Landscape Architecture.** (Refer to 04.0601)

01.0606 **Nursery Operations and Management**. An instructional program that prepares individuals to produce turf, shrubs, and trees for the purpose of transplanting or propagation. Includes instruction in enterprise management.

01.0607 **Turf Management**. An instructional program that prepares individuals to establish, manage and maintain ornamental or recreational grassed areas, to prepare and maintain athletic playing surfaces, and to produce turf for transplantation.

01.0699 **Horticulture/Services Operations and Management, Other**. Any instructional program in horticulture management and production not described above.

01.07. **International Agriculture**. (See 01.0701)

01.0701 **International Agriculture**. An instructional program that describes the application of agricultural principles to problems of global food production and distribution, and to the study of the agricultural systems of other nations.

01.99 **Agricultural Business and Production, Other**. (See 01.9999)

01.9999 **Agricultural Business and Production, Other.** Any instructional program in agricultural business and production not described above.

02. **AGRICULTURAL SCIENCES.** A summary of groups of instructional programs that describe the study of animals and plants as related to agricultural production, the organization of agricultural work, and the processing and distribution of food and fiber products.

02.01 **Agriculture/Agricultural Sciences.** (See 02.0101)

02.0101 **Agriculture/Agricultural Sciences, General.** An instructional program that generally describes the principles and practices of agricultural research and production, and may prepare individuals to apply such knowledge and skills to the solution of practical agricultural problems. Includes instruction in basic animal, plant, and soil science; animal husbandry and plant cultivation; and soil conservation.

------ **Agricultural Teacher Education.** (Refer to 13.1301)

------ **Agricultural Engineering.** (Refer to 14.0301)

02.0102 **Agricultural Extension.** An instructional program that prepares individuals to provide referral, consulting, assistance and educational services to farmers and ranchers via local, state or federal government agencies. Includes instruction in agricultural sciences, agricultural business operations, agricultural law and administrative regulations, public relations, and communications skills.

02.0103 Agricultural Chemistry. An instructional program that describes the principles of chemistry as applied to agriculture. Includes instruction in subjects such as applied and organic chemistry, chemical analysis, soil chemistry, food chemistry, instrumental food analysis, and retrotracing.

02.02 **Animal Sciences.** (See 02.0201)

------ **Zoology.** (Refer to 26.07 Series)

02.0201 **Animal Sciences, General.** An instructional program that generally describes the scientific principles that underlies the breeding and husbandry of agricultural animals, and the production, processing, and distribution of agricultural animal products.

02.0202 **Agricultural Animal Breeding and Genetics.** An instructional program that describes the application of genetics to the improvement of agricultural animal health, the development of new animal breeds, and the selective improvement of animal populations.

------ **Genetics, Plant and Animal.** (Refer to 26.0613)

02.0203 **Agricultural Animal Health.** An instructional program that describes the scientific principles that affects the prevention and control of diseases in agricultural animals.

------ **Veterinary Assistant/Animal Health Technician.** (Refer to 51.0808)

------ **Veterinary Medicine (D.V.M.).** (Refer to 51.2401)

------ **Veterinary Clinical Sciences (MS, Ph.D.).** (Refer to 51.2501)

02.0204 **Agricultural Animal Nutrition.** An instructional program that describes the biology and chemistry of proteins, fats, carbohydrates, water, vitamins, and feed additives and their relation to animal health and the production of improved animal products.

------ **Nutritional Sciences.** (Refer to 26.0609)

02.0205 **Agricultural Animal Physiology.** An instructional program that describes the application of physiological principles to the study of agricultural animals and production problems. Instruction is provided in lactation, reproduction, digestion and growth.

----- **Physiology, Human and Animal.** (Refer to 26.0706)

02.0206 **Dairy Science**. An instructional program that describes the biological theories, principles and applications that apply to the production and management of dairy animals and the production of milk products.

------ **Agricultural Animal Husbandry and Production Management.** (Refer to 01.0302)

------ **Entomology**. (Refer to 26.0702)

02.0209 **Poultry Science**. An instructional program that describes the scientific theories, principles, and applications pertaining to the management of poultry populations and the production of poultry products.

------ **Agricultural Animal Husbandry and Production Management.** (Refer to 01.0302)

------ **Fishing and Fisheries Management and Sciences.** (Refer to 03.0301)

02.0299 **Animal Sciences, Other.** Any instructional program in animal sciences not described above.

02.03 **Food Sciences and Technology.** (See 02.0301)

02.0301 **Food Sciences and Technology.** An instructional program that describes the biological, chemical, physical and engineering principles and practices involved in converting agriculture products to forms suitable for direct human consumption or for storage, and the solution of problems relating to product transportation, storage and marketing.

------ **Agricultural Engineering.** (Refer to 14.0301)

------ **Foods and Nutrition Science**. (Refer to 19.0502)

02.04 **Plant Sciences**. (See 02.0401)

------ **Botany.** (Refer to 26.03 Series)

02.0401 **Plant Sciences, General.** An instructional program that generally describes the scientific theories and principles involved in the production and management of plants for food, feed, fiber and soil conservation.

------ **Crop Production Operations and Management.** (Refer to 01.0304)

02.0402 **Agronomy and Crop Science**. An instructional program that describes the chemical, physical and biological relationships of crops and the soils nurturing them. Includes instruction in the growth and behavior of agricultural crops, the breeding of improved and new crop varieties, and the scientific management of soils for maximum plant nutrition and health.

02.0403 **Horticulture Science.** An instructional program that describes the scientific principles involved in the cultivation of garden and ornamental plants, including fruits, vegetables, flowers, landscape and nursery crops. Includes instruction in specific types of plants, plant breeding, plant physiology, and the management of garden/nursery crops throughout the plant life cycle.

02.0405 **Plant Breeding and Genetics.** An instructional program that describes the scientific theories and principles underlying plant breeding, development and mutation, including hybridization and differential selection for plant improvement. Includes instruction in botanical biometry, statistics and computer analysis.

------ **Genetics, Plant and Animal**. (Refer to 26.0613)

02.0406 **Agricultural Plant Pathology.** An instructional program that describes the scientific principles associated with recognizing diseased plants, identifying causal agents, the development of disease response mechanisms and treatments, and the prevention or reduction of economic loss.

------ **Plant Pathology**. (Refer to 26.0305)

02.0407 **Agricultural Plant Physiology**. An instructional program that describes the scientific principles involved in the life processes of plants and plant responses to the elements of the physical environment, including nutrition, respiration, growth, photosynthesis, and reproduction.

------ **Plant Physiology**. (Refer to 26.0307)

02.0408 **Plant Protection (Pest Management).** An instructional program that describes the principles and practices of controlling and preventing economic loss caused by plant pests, and related environmental protection measures. Includes instruction in entomology, plant pathology, weed science, crop science and environmental toxicology.

------ **Parasitology**. (Refer to 26.0610)

------ **Entomology**. (Refer to 26.0702)

02.0409 **Range Science and Management**. An instructional program that describes the scientific principles and practices involved in studying and managing rangelands, arid regions, grasslands and other areas of low productivity. Includes instruction in livestock grazing systems management, soil science, plant and wildlife ecology, and hydrology.

------ **Wildlife and Wildlands Management**. (Refer to 03.0601)

02.0499 **Plant Sciences, Other.** Any instructional program in plant sciences not described above.

02.05 **Soil Sciences**. (See 02.0501)

02.0501 **Soil Sciences**. An instructional program that describes the scientific classification and study of soils and soil properties. Includes instruction in soil chemistry, soil physics, soil biology, soil fertility, morphogenesis, mineralogy and hydrology, and soil conservation and management.

------ *Agricultural Chemistry.* (Refer to ***02.0103***)

02.99 **Agriculture/Agricultural Sciences, Other**. (See 02.9999)

02.9999 **Agriculture/Agricultural Sciences, Other**. Any instructional programs in agriculture/agricultural sciences not described above.

03. **CONSERVATION AND RENEWABLE NATURAL RESOURCES**. A summary of groups of instructional programs that prepare individuals for activities involving the conservation and/or improvement of natural resources.

03.01 **Natural Resources Conservation**. (See 03.0101)

03.0101 **Natural Resources Conservation, General**. An instructional program that generally describes activities involving the conservation and/or improvement of natural resources such as air, soil, water, land, fish, and wildlife for economic and recreation purposes.

03.0102 Environmental Science/~~Studies~~. An instructional program that describes the study of the biological and physical aspects of the environment and environment-related issues, including methods of abating or controlling environmental pollution and collateral damage. An instructional program that describes the scientific study of the biological, chemical, and physical aspects of the environment. Includes the study of physical methods of abating and controlling environmental pollution, collateral damage, and the prevention of animal and plant extinction. (Environmental Studies is included and should be reported in 03.0103)

03.0103 Environmental Studies. An instructional program that describes the study of environment-related issues, including policy and legislation, social and legal aspects, economic aspects, and a basic grounding in the scientific principles of the ecosystem and environmental conservation.

------ **Ecology**. (Refer to 26.0603)

03.02 **Natural Resources Management and Policy Studies**. A group of instructional programs preparing individuals to engage in activities concerned with monitoring and maintaining the quality of the natural environment.

03.0201 **Natural Resources Management and Policy**. An instructional program that prepares individuals to plan, develop and conduct programs to protect and maintain habitats and renewable natural resources. Includes instruction in wildlife biology, animal population surveys, conservation techniques, education, and administration.

------ **Public Policy Analysis**. (Refer to 44.0501)

------ **Applied and Resource Economics.** (Refer to 45.0602)

~~03.0203 **[Natural Resources Law Enforcement and Protective Services.]** An instructional program that prepares individuals to enforce natural resource and environmental protection regulations and laws; and to perform emergency duties to protect human life, property and natural resources, including fire prevention and control measures, and emergency and rescue procedures.~~ (Deleted, included under 43.0107)

03.0204 Marine Resources Management. An instructional program that prepares individuals to apply the principles of marine/aquatic biology, oceanography, the social sciences, and public policy to issues concerning the development, conservation, and management of freshwater and saltwater marine environments. Includes instruction in subjects such as riverine, lacustrian, coastal, and oceanic use planning, marine law and policy, maritime law enforcement, maritime transportation, fisheries and marine economics, development of non-living marine resources, maritime and coastal tourism, and conflict management.

03.0299 **Natural Resources Management and Policy, Other**. Any instructional program in natural resources management and protective services not described above.

03.03 **Fishing and Fisheries Sciences and Management**. (See 3.0301)

03.0301 **Fishing and Fisheries Sciences and Management.** An instructional program that describes the scientific study of the husbandry of fish populations for recreational, ecological, and commercial purposes and the application of such studies to the management of marine life resources and fisheries. Includes instruction in principles of aquatic and marine biology, water resources, fishing production and management operations, fishing regulations, water quality monitoring, and the management of recreational and commercial fishing activities.

------ **Aquaculture Operations and Production Management.** (Refer to 01.0303)

------ **Marine/Aquatic Biology.** (Refer to 26.0607)

------ **~~Fishing Technology~~/Commercial Fishing.** (Refer to 49.0303)

03.04 **Forest Production and Processing *Technologies/Technicians*.** A group of instructional programs that prepare individuals to assist foresters, scientists and wood processing facility managers in the maintenance of forest lands and resources, and the harvesting and processing of forest products.

------ **Agricultural Production Workers and Managers.** (Refer to 01.03 Series)

03.0401 **Forest Harvesting and Production Technology/Technician**. An instructional program that prepares individuals to assist foresters in managing, protecting and harvesting timber stands and specialty forest crops. Includes instruction in equipment maintenance and repair, tree planting, selection and identification of trees for special attention, transplantation and harvesting, and forest management and safety procedures.

03.0404 **Forest Products Technology/Technician.** An instructional program that prepares individuals to assist a manager, engineer, chemist, or forest product scientist in the measurement, analysis of quality, testing, and processing of harvested forest raw materials, and the selection, grading and marketing of forest products to be used for specific purposes. Includes instruction in identifying, measuring, assessing quality, evaluating commercial value, and strength testing.

~~03.0405 **[Logging/Timber Harvesting.]** An instructional program that prepares individuals to operate logging equipment and machinery for the direct harvesting of timber crops, including equipment maintenance and the practice of safety procedures.~~ (Deleted, included under 03.0499)

03.0499 **Forest Production and Processing *Technologies/Technicians*, Other**. Any instructional program in forestry production and processing not described above.

03.05 **Forestry and Related Sciences.** A group of instructional programs that prepare individuals to apply scientific, engineering, and management principles to the management and use of natural resources that occur on, and in association with, forest lands.

------ **AGRICULTURAL SCIENCES**. (Refer to 02. Series)

------ **BIOLOGICAL SCIENCES/LIFE SCIENCES.** (Refer to 26. Series)

03.0501 **Forestry, General.** An instructional program that generally prepares individuals to manage and develop forest areas for economic, recreational and ecological purposes. Includes instruction in forest-related sciences, mapping, statistics, harvesting and production technology, resource protection, management, ecology and biology, administration, and public relations.

------ **Natural Resources Conservation, General.** (Refer to 03.0101)

03.0502 **Forestry Sciences.** An instructional program that describes the application of scientific principles to the study of environmental factors affecting forests and to the growth and management of forest resources. Includes instruction in forest biology, forest hydrology, forest engineering, silviculture, disease and pest control, and the development of improved tree varieties.

------ **Plant Sciences.** (Refer to 02.04 Series)

------ **Botany**. (Refer to 26.03 Series)

------ **Soil Sciences.** (Refer to 02.0501)

------ ***Environmental Science/~~Studies~~.*** (Refer to ***03.0102***)

03.0506 **Forest Management.** An instructional program that prepares individuals in the management and administration of forests and forest lands. Includes instruction in silviculture, forest protection, forest policy, and forest resources planning and economics.

------ **Agricultural Business/Agribusiness Operations**. (Refer to 01.0102)

------ **Agricultural Production Workers and Managers, General.** (Refer to 01.0301)

------ **Natural Resources Management and Policy**. (Refer to 03.0201)

03.0509 **Wood Science and Pulp/Paper Technology**. An instructional program that prepares individuals to apply scientific and engineering principles to analyze the properties and behavior of wood and wood products; to analyze the chemical and physical processes involved in converting wood into paper and other products; and the design and development of related machinery and systems.

------ **Agricultural Engineering.** (Refer to 14.0301)

------ ***Forest Engineering*** (Refer to ***14.3401***)

03.0599 **Forestry and Related Sciences, Other**. Any instruction program in forestry and related sciences not described above.

03.06 **Wildlife and Wildlands Management**. See 03.0601).

03.0601 **Wildlife and Wildlands Management**. An instructional program that prepares individuals in the principles and practices used in the conservation and management of wildlands and wildlife resources for aesthetic, ecological, and recreational uses.

------ **Range Science and Management**. (Refer to 02.0409)

------ **Natural Resources Management and Policy**. (Refer to 3.0201)

03.99 **Conservation and Renewable Natural Resources, Other.** (See 03.9999).

03.9999 **Conservation and Renewable Natural Resources, Other**. Any instructional program in conservation and renewable natural resources not described above.

04. **ARCHITECTURE AND RELATED PROGRAMS**. A summary of groups of instructional programs that describe the principles and methods used to create, adapt, alter, preserve, and control human physical and social surroundings and habitations.

04.02 **Architecture.** (See 04.0201).

04.0201 **Architecture.** An instructional program that prepares individuals for the independent professional practice of architecture. Includes instruction in architectural design; architectural history and theory; building structures and environmental systems; site planning; construction; professional responsibilities and standards; and the cultural, social, economic and environmental issues relating to architectural practice.

------ **Architectural Engineering.** (Refer to 14.0401)

------ **Construction Engineering**. (Refer to 14.3301)

------ **Architectural Engineering Technology/Technician.** (Refer to 15.0101)

------ **Construction/Building Technology/Technician.** (Refer to 15.1001)

------ **Historic Preservation, Conservation and Architectural History.** (Refer to 30.1201)

------ **Architectural Drafting.** (Refer to 48.0102)

04.03 **City/Urban, Community and Regional Planning.** (See 04.0301).

04.0301 **City/Urban, Community and Regional Planning.** An instructional program that prepares individuals to apply principles of planning and analysis to the development and improvement of urban areas or surrounding regions, including the development of master plans, the design of urban services systems, and the economic and policy issues related to planning and plan implementation.

------ **Community Organization, Resources and Services.** (Refer to 44.0201)

------ **Public Policy Analysis.** (Refer to 44.0501)

------ **Urban Affairs/Studies.** (Refer to 45.1201)

04.04 **Architectural Environmental Design.** (See 04.0401).

04.0401 **Architectural Environmental Design.** An instructional program that prepares individuals for the independent professional practice of environmental architecture -- the processes and techniques of designing total environments and living systems for human populations, both indoor and outdoor. Includes instruction in relating the structural, aesthetic and social concerns affecting life and work to the needs of clients and the constraints of the site environment.

04.05 **Interior Architecture.** (See 04.0501).

04.0501 **Interior Architecture.** An instructional program that prepares individuals for the independent professional practice of interior architecture -- the processes and techniques of designing living, work and leisure indoor environments as integral components of a building system. Includes instruction in building design and structural systems, heating and cooling systems, safety and health standards, and interior design principles and standards.

------ **Interior Design.** (Refer to 50.0408)

04.06 **Landscape Architecture.** (See 04.0601).

04.0601 **Landscape Architecture.** An instructional program that prepares individuals for the independent professional practice of landscape architecture. Includes instruction in site planning, site analysis, site engineering, environmental impact, garden and landscape art and design, horticulture, and applicable regulations.

------ **Landscaping Operations and Management.** (Refer to 01.0605)

04.07 **Architectural Urban Design and Planning.** A group of instructional programs (See 04.0701). (Deleted, included under 04.03)

04.0701 **Architectural Urban Design and Planning**. An instructional program that prepares individuals for the independent professional practice of urban systems design and planning -- the processes and techniques of designing and modifying the physical elements constituting built urban environments. Includes instruction in regional and community-site planning, architecture, systems planning, transportation and logistics design, human services planning, legal codes and zoning development, and related economic and policy issues. (Deleted, included under 04.0301)

04.99 **Architecture and Related Programs, Other.** (See 04.9999)

04.9999 **Architecture and Related Programs, Other.** Any instructional program in architecture and related programs not described above.

05. **AREA, ETHNIC AND CULTURAL STUDIES.** A summary of groups of instructional programs that describe the history, society, politics, culture, and economics of a particular geographic region, or a particular subset of the population sharing common characteristics, traits and customs.

------- **MULTI/INTERDISCIPLINARY STUDIES.** (Refer to 30.Series)

------ **FOREIGN LANGUAGES AND LITERATURES**. (Refer to 16. Series)

------ **SOCIAL SCIENCES AND HISTORY.** (Refer to 45. Series)

------ **VISUAL AND PERFORMING ARTS.** (Refer to 50. Series)

05.01 **Area Studies.** A group of instructional programs that describe the history, society, politics, culture, and economics of a particular geographic region.

------ **International Relations and Affairs.** (Refer to 45.09 Series)

------ **Development Economics and International Development.** (Refer to 45.0604)

05.0101 **African Studies**. An instructional program that describes the history, society, politics, culture, and economics of Africa, with emphasis on societies south of the Sahara.

------ **African-American (Black) Studies.** (Refer to 05.0201)

05.0102 **American Studies/Civilization.** An instructional program that describes the history, society, politics, culture, economics, art, and literature of North America, with particular reference to the United States and its peoples, including immigrant populations.

------ **Ethnic and Cultural Studies.** (Refer to 05.02 Series)

------ **American Literature (United States).** (Refer to 23.0701)

------ **American History (United States).** (Refer to 45.0802)

------ **American Government and Politics.** (Refer to 45.1002)

05.0103 **Asian Studies.** An instructional program that describes the general history, society, politics, culture, economics, art, and literature of the peoples of the Asian Continent and its borderlands, including archipelagoes and other associated island groups.

------ ***Asian History.*** (Refer to ***45.0806***)

05.0104 **East Asian Studies.** An instructional program that describes the history, society, politics, culture, economics, art, and literature of East Asia, including China, Japan, Korea, Mongolia and Eastern Central Asia, Taiwan and Tibet.

------ ***Asian History.*** (Refer to ***45.0806***)

~~05.0105 **[Eastern European Area Studies.]** An instructional program that describes the history, society, politics, culture, and economics of Eastern Europe, including the Balkans, Czechoslovakia, Hungary, Poland, Romania, the European portions of the former U.S.S.R. and its constituent republics, and the region of Germany comprising the former East Germany~~. (Deleted, included under 05.0106)

05.0106 **European *Area* Studies.** An instructional program that describes the general history, society, politics, culture, economics, art, and literature of the peoples of the European Continent and its borderlands.

------ **European History.** (Refer to 45.0803)

05.0107 **Latin American Studies.** An instructional program that describes the history, society, politics, culture, economics, art, and literature of the peoples of Mexico, the Caribbean, Central America, and South America.

------ **Ethnic and Cultural Studies.** (Refer to 05.02 Series)

------ **Romance Languages and Literatures.** (Refer to 16.09 Series)

05.0108 **Middle Eastern Studies.** An instructional program that describes the history, society, politics, culture, economics, art, and literature of the peoples of the Fertile Crescent, Arabic-speaking North Africa, Anatolia, the Caucasus, Iran, the Arabian Peninsula, and the borderlands of Central Asia and the Northwestern Indian Subcontinent.

------ **Ethnic and Cultural Studies.** (Refer to 05.02 Series)

------ **Middle Eastern Languages and Literatures.** (Refer to 16.11 Series)

~~05.0109 **[Pacific Area Studies.]** An instructional program that describes the history, society, politics, culture, and economics of Australia, New Zealand and the Pacific Islands; excluding the Philippines, Taiwan and Japan.~~ (Deleted)

05.0110 **Russian and Slavic Area Studies.** An instructional program that describes the history, society, politics, culture, economics, art, and literature of the Slavic peoples of Europe, including Russia.

05.0111 **Scandinavian Area Studies.** An instructional program that describes the history, society, politics, culture, economics, art, and literature of the Scandinavian peoples of Northern Europe and the Baltic Rim, including Denmark, Finland, Iceland, Norway, Sweden, the Faeroe and Aland Islands, and the Sami.

~~05.0112 **[South Asian Studies.]** An instructional program that describes the history, society, politics, culture, and economics of the peoples of the Indian Subcontinent and the Indian Ocean, including Bangladesh, Bhutan, India, Nepal, Pakistan, Sri Lanka, and the Maldives Islands.~~ (Deleted, included under 05.0116)

~~05.0113 **[Southeast Asian Studies.]** An instructional program that describes the history, society, politics, culture, and economics of the Southeast Asian Peninsula and the Indonesian and Philippine Archipelagoes, including Burma, Cambodia, Indonesia, Laos, Malaysia, The Philippines, Singapore, Thailand and Vietnam.~~ (Deleted, included under 05.0116)

------ **Ethnic and Cultural Studies**. (Refer to 05.02 Series)

------ **East and Southeast Asian Languages and Literatures.** (Refer to 16.03 Series)

~~05.0114 **[Western European Studies.]** An instructional program that describes the history, society, politics, culture and economics of the Western European peoples, including the Alpine region, the British Isles, France, the Iberian Peninsula, Italy, the Low Countries, and Germany~~. (Deleted, included under 05.0106)

05.0115 **Canadian Studies.** An instructional program that describes the history, society, politics, culture, economics, art, and literature of Canada before and after Confederation, including immigrant, and aboriginal peoples.

05.0116 South and Southeast Asian Studies. An instructional program that describes the history, society, politics, culture, economics, art, and literature of the peoples of the Indian Subcontinent, the peninsula of Southeast Asia, and related archipelagoes and offshore island groups.

05.0199 **Area Studies, Other.** Any single instructional program in area studies not described above.

05.02 **Ethnic and Cultural Studies.** A group of instructional programs that describe the history, society, politics, culture, and economics of subsets of the population sharing common racial characteristics or common traits and customs.

05.0201 **African-American (Black) Studies**. An instructional program that describes the history, society, politics, culture, economics, art, and literature of the peoples in the Western Hemisphere descended from the African Diaspora, with emphasis on North America, the Caribbean, and Brazil.

05.0202 **American Indian/Native American Studies.** An instructional program that describes the history, society, politics, culture, economics, art, and literature of the original inhabitants of the Western Hemisphere, including American Indians, Aleuts and Inuits, and others.

05.0203 **Hispanic American Studies**. An instructional program that describes the history, society, politics, culture, economics, art, and literature of Hispanic Americans in the United States, including Mexican-Americans, Puerto Ricans, Cuban-Americans, and others.

------ **Latin American Studies.** (Refer to 05.0107)

05.0204 **Islamic Studies.** An instructional program that describes the history, traditions, literature, society, politics, culture, economics, art, and literature of the Islamic peoples, predominantly from an academic perspective.

05.0205 **Jewish/Judaic Studies.** An instructional program that describes the history, traditions, literature, society, politics, culture, economics, art, and literature of the Jewish people, predominantly from an academic perspective.

------ **Rabbinical and Talmudic Studies.** (Refer to 39.0603)

~~05.0206 [**Asian-American Studies.**] An instructional program that describes the history, society, politics, culture and economics of Asian-Americans in the United States including immigrants and their descendants from East Asia, South Asia, and Southeast Asia~~. (Deleted, included under 05.0299)

05.0207 **Women's Studies.** An instructional program that describes the history, society, politics, culture, economics, art, and literature of women as individuals and social actors. Includes instruction in feminist theory and perspectives, as well as other approaches and methods.

05.0208 Regional and Cultural Minority Studies. An instructional program that describes the history, society, politics, culture, economics, art, and literature of various populations and groups defined by geography and culture as distinct minorities within one or more countries. Examples include defined regional subcultures such as the U.S. South, Appalachia, West, and New England; Siberia (Russia); Manchuria (China); and regional minorities such as Acadians (Canada); Kurds (Middle East); and Romany (Europe).

05.0299 **Ethnic and Cultural Studies, Other.** Any single instructional program in ethnic and cultural studies not described above.

05.99 **Area, Ethnic and Cultural Studies, Other.** (See 05.9999)

05.9999 **Area, Ethnic and Cultural Studies, Other.** Any instructional program in area, ethnic and cultural studies not described above.

06. **[~~BUSINESS AND MANAGEMENT.~~]** (Moved to 52. Series **BUSINESS MANAGEMENT AND ADMINISTRATIVE SERVICES.**)

07. **[~~BUSINESS (ADMINISTRATIVE SUPPORT)~~.]** (Moved to 52. Series **BUSINESS MANAGEMENT AND ADMINISTRATIVE SERVICES.**)

08. ***SALES AND*** **MARKETING OPERATIONS/MARKETING AND DISTRIBUTION**. A summary of groups of instructional programs that prepare individuals to plan and execute, at the operational or direct sales level, the promotion and distribution of ideas, goods and services in order to create exchanges that satisfy individual and organizational objectives.

------ **BUSINESS MANAGEMENT AND ADMINISTRATIVE SERVICES.** (Refer to 52. Series)

------ **Marketing Management and Research.** (Refer to 52.14 Series)

------ ***Sales and*** **Marketing Operations Teacher Education/Marketing and Distributive Teacher Education.** (Refer to 13.1310)

08.01 **Apparel and Accessories Marketing Operations.** (See 08.0101)

08.0101 **Apparel and Accessories Marketing Operations, General.** An instructional program that generally prepares individuals to perform marketing tasks specifically applicable to all segments of the apparel and fashion industry.

08.0102 **Fashion Merchandising.** An instructional program that prepares individuals to perform wholesaling tasks specifically applicable to promoting product lines to the retail segment of the apparel and fashion industry.

08.0103 **Fashion Modeling.** An instructional program that prepares individuals to model (i.e., display) clothing or clothing-related articles for designers, buyers, salespeople, and potential customers.

08.0199 **Apparel and Accessories Marketing Operations, Other.** Any instructional program in apparel and accessories marketing operations not described above.

~~08.02 **[Business and Personal Services Marketing Operations.]** A group of instructional programs that prepare individuals to apply marketing concepts in the delivery of services to business or for personal consumption.~~ (Deleted, included under 08.99)

~~08.0204 **[Business Services Marketing Operations.]** An instructional program that prepares individuals to perform marketing tasks specifically applicable to business community services~~. (Deleted, included under 08.9999)

~~08.0205 **[Personal Services Marketing Operations.]** An instructional program that prepares individuals to perform marketing tasks specifically applicable to personal services~~. (Deleted, included under 08.9999)

~~08.0299 **[Business and Personal Services Marketing Operations, Other.]** Any instructional program in business or personal services marketing operations not described above~~. (Deleted, included under 08.9999)

08.03 **Entrepreneurship.** (See 08.0301)

08.0301 **Entrepreneurship**. An instructional program that prepares individuals to perform marketing tasks specifically applicable to developing business enterprises.

~~08.04 **[Financial Services Marketing Operations.]** A group of instructional programs (See 08.0401)~~ (Deleted, included under 08.99)

~~08.0401 **[Financial Services Marketing Operations.]** An instructional program that prepares individuals to perform marketing tasks specifically applicable to banks, credit unions, and other financial institutions.~~ (Deleted, included under 08.9999)

08.05 **Floristry Marketing Operations.** (See 08.0503)

08.0503 **Floristry Marketing Operations.** An instructional program that prepares individual to perform marketing tasks specifically applicable to the floristry industry.

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08.06 **Food Products Retailing and Wholesaling Operations.** (See 08.0601)

08.0601 **Food Products Retailing and Wholesaling Operations.** An instructional program that prepares individuals to perform marketing tasks specifically applicable to food supplies and grocery wholesaling and retailing.

08.07 **General *Sales and Marketing/*~~*Wholesaling and Retailing*~~ Operations ~~and Skills~~.** (See 08.0708-08.0799)

~~08.0701[**Auctioneering.**] An instructional program that prepares individuals to sell articles at an auction to the highest bidder~~. (Deleted, included under 08.0799)

------ **International Marketing.** (Refer to 52.1403)

08.0704 **General Buying Operations.** An instructional program that prepares individuals to perform marketing tasks specifically applicable to obtaining goods and services for a business.

------ **Purchasing, Procurement and Contracts Management.** (Refer to 52.0202)

08.0705 **General Retailing Operations.** An instructional program that prepares individuals to perform marketing tasks specifically applicable to retail operations in a wide variety of settings.

08.0706 **General Selling Skills and Sales Operations.** An instructional program that prepares individuals to perform the techniques of direct consumer persuasion, involving planned, personalized communications, as agents for a wide variety of industries and product types.

08.0708 **General *Sales and* Marketing Operations.** An instructional program that prepares individuals to perform various marketing tasks applicable to a wide variety of industries and commercial settings.

------ **Business Marketing, General.** (Refer to 52.1401)

~~08.0709 [**General Distribution Operations.**] An instructional program that prepares individuals to perform marketing tasks specifically applicable to storing and shipping commodities, either for businesses or retail consumers~~. (Deleted, included under 08.0799)

------ **Logistics and Materials Management.** (Refer to 52.0203)

08.0799 **General *Sales and Marketing/*~~*Wholesaling and Retailing*~~ Operations ~~and Skills~~, Other.** Any instructional program in miscellaneous marketing operations skills not described above.

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~~08.08~~ ~~**[Home and Office Products Marketing Operations.]**~~ ~~An instructional program that prepares individuals to perform marketing tasks at all levels relating to the sales of either home or office products~~. (Deleted, included under 08.99)

~~08.0809~~ ~~**[Home Products Marketing Operations.]**~~ ~~An instructional program that prepares individuals to perform marketing tasks specifically applicable to hardware, building materials and equipment, and household supplies.~~ (Deleted, included under 08.9999)

~~08.0810~~ ~~**[Office Products Marketing Operations.]**~~ ~~An instructional program that prepares individuals to perform marketing tasks specifically applicable to business equipment and supplies.~~ (Deleted, included under 08.9999)

~~08.0899~~ ~~**[Home and Office Products Marketing Operations, Other]**~~. ~~Any instructional program in home and offices products marketing operations not described above~~. (Deleted, included under 08.9999)

08.09 **Hospitality ~~and Recreation~~ Marketing Operations.** (See 08.0901)

------ **Hospitality Services Management.** (Refer to 52.09 Series)

08.0901 **Hospitality ~~and Recreation~~ Marketing Operations, General.** An instructional program that generally prepares individuals to perform marketing tasks applicable to a wide variety of hospitality and leisure industry settings.

08.0902 **Hotel/Motel Services Marketing Operations.** An instructional program that prepare individuals to perform marketing tasks specifically applicable to hotels and motels.

~~08.0903~~ ~~**[Recreation Products/Services Marketing Operations.]**~~ ~~An instructional program that prepares individuals to perform marketing tasks specifically applicable to the retail sports and recreation equipment and supplies industry~~. (Deleted, included under 08.0999)

~~08.0906~~ ~~**[Food Sales Operations.]**~~ ~~An instructional program that prepares individuals to perform marketing tasks specifically applicable to the ready-to-eat food and beverage industry~~. (Deleted, included under 08.0999)

08.0999 **Hospitality ~~and Recreation~~ Marketing Operations, Other.** Any instructional program in hospitality and recreation marketing operations not described above.

08.10 **Insurance Marketing Operations.** (See 08.1001)

08.1001 **Insurance Marketing Operations.** An instructional program that prepares individuals to perform marketing tasks specifically applicable to the insurance industry.

------ **Insurance and Risk Management.** (Refer to 52.0805)

08.11 **Tourism and Travel Services Marketing Operations.** A group of instructional programs that prepare individuals to perform marketing operations tasks in various travel and tourism settings.

------ **Hospitality Services Management.** (Refer to 52.09 Series)

08.1104 **Tourism Promotion Operations.** An instructional program that prepares individuals to perform marketing tasks specifically applicable to the tourism promotion industry.

08.1105 **Travel Services Marketing Operations.** An instructional program that prepares individuals to perform marketing tasks specifically applicable to the travel industry.

08.1199 **Tourism and Travel Services Marketing Operations, Other**. Any instructional in tourism and travel services marketing operations not described above.

08.12 **Vehicle ~~and Petroleum~~ Products Marketing Operations.** A group of instructional program that prepares individuals to perform marketing tasks applicable to the vehicular parts and accessories sales. and retail petroleum industries.

08.1203 **Vehicle Parts and Accessories Marketing Operations.** An instructional program that prepares individuals to perform marketing tasks specifically applicable to the retail vehicular parts and accessories industry.

~~08.1208 **[Vehicle Marketing Operations.]** An instructional program that prepares individuals to perform marketing tasks specifically applicable to the retail vehicle sales industry~~. (Deleted, included under 08.1299)

~~08.1209 **[Petroleum Products Retailing Operations.]** An instructional program that prepares individuals to perform marketing tasks specifically applicable to the retail petroleum products and service industry~~. (Deleted, included under 08.1299)

08.1299 **Vehicle ~~and Petroleum~~ Products Marketing Operations, Other**. Any instructional program in vehicle and petroleum products marketing operations not described above.

~~08.13 **[Health Products and Services Marketing Operations.]** A group of instructional programs that prepare individuals to market health products and services.~~ (Deleted, included under 08.99)

~~08.1301 **[Health Products and Services Marketing Operations.]** An instructional program that prepares individuals to perform marketing tasks specifically applicable to the health care supplies and services industry.~~ (Deleted, included under 08.9999)

08.99 ***Sales and*** **Marketing Operations/Marketing and Distribution, Other**. (See 08.9999)

08.9999 ***Sales and*** **Marketing Operations/Marketing and Distribution, Other**. Any instructional program in marketing operations/marketing and distribution not described above.

09. **COMMUNICATIONS, *JOURNALISM AND RELATED FIELDS.*** A summary of groups of instructional programs that describe the creation, transmission and evaluation of messages.

09.01 **Communications, General**. (See 09.0101).

09.0101 **Communications, General**. An instructional program that generally describes the creation, transmission and evaluation of messages at all levels, for commercial or non-commercial purposes and that may prepare individuals to apply principles of communications to work in specific media. Includes instruction in modes and behavioral aspects of human communications, and the formal means by which society organizes communications.

------ **Speech and Rhetorical Studies**. (Refer to 23.1001)

09.02 **Advertising**. (See 09.0201).

------ **Design and Applied Arts.** (Refer to 50.04 Series)

------ **Marketing Management and Research.** (Refer to 52.14 Series)

09.0201 **Advertising.** An instructional program that describes the creation, execution, transmission, and evaluation of commercial messages concerned with the promotion and sale of products and services, and that prepares individuals to function as advertising assistants, technicians, managers and executives. Includes instruction in advertising theory; marketing strategy; advertising copy/art, layout and production methods; and media relations.

09.04 **Journalism and Mass Communications**. A group of instructional programs that describe the study of news production in various media, and the study of the provision of entertainment and information communications to mass audiences.

09.0401 **Journalism**. An instructional program that describes the methods and techniques for gathering, processing and delivering news, and that prepares individuals to be professional print journalists. Includes instruction in news writing and editing, reporting, journalism law and policy, professional standards and ethics, and journalism history and research.

09.0402 **Broadcast Journalism.** An instructional program that describes the methods and techniques by which radio and television news programs are produced and delivered, and that prepares individuals to be professional broadcast journalists. Includes instruction in principles of broadcast technology; program design and production; broadcast editing; on- and off-camera procedures and techniques; and broadcast media law and policy.

09.0403 **Mass Communications.** An instructional program that describes the study of the media by which entertainment and information messages are delivered, and the social effects of such messages. Includes instruction in communications theory; communications laws and policies; international communications media; propaganda and political communications; social issues in entertainment and mass communications; and the study of specific media and media organizations.

09.0499 **Journalism and Mass Communications, Other.** Any instructional program in journalism and mass communications not described above.

09.05 **Public Relations and Organizational Communications**. (See 09.0501).

09.0501 **Public Relations and Organizational Communications.** A instructional program that describes the methods and techniques for communicating image-oriented corporate and sponsor messages to various audiences, for promoting client interests, and for managing client-media relations, and that prepares individuals to perform public relations and related services.

09.07 **Radio and Television Broadcasting.** (See 09.0701).

09.0701 **Radio and Television Broadcasting.** An instructional program that describes the methods and techniques used to plan, produce and direct entertainment and informational programs and short subjects in the broadcast media, and that prepares individuals to function as professional announcers, directors and producers. Includes instruction in scheduling; film and tape editing; on- and off-camera/microphone procedures and techniques; sound mixing; studio direction; personnel and facilities management; and broadcast law, policies and code regulations.

09.09 Digital Communications and Media. (See 09.0901)

09.0901 Digital Communications and Media. (Definition to be developed - suggestions welcome).

09.99 **Communications, *Journalism and Related Fields*, Other.** (See 09.9999)

09.9999 **Communications, *Journalism and Related Fields*, Other**. Any instructional program in communications not described above.

10. **COMMUNICATIONS TECHNOLOGIES**. A summary of groups of instructional programs that prepare individuals to support and assist communications professionals and skilled communications workers.

10.01 **Communications Technologies/*Technicians***. A group of instructional programs that prepare individuals to support and assist communications professionals and skilled communications workers.

~~10.0101 **[Educational/Instructional Media Technology/Technician.]** An instructional program that prepares individuals to assist instructional media designers and other communications professionals in preparing educational and training films, tapes, recordings, videos, slides and overheads, and in operating related technical equipment~~. (Deleted)

10.0103 **Photographic Technology/Technician**. An instructional program that prepares individuals to support photographers and other professionals in preparing still, motion picture and video products; developing film and related technical processes; and operating specialized equipment.

------ **Commercial Photography.** (Refer to 50.0406)

------ **Film-*Video Making/*~~Motion Picture Making~~,/ Cinematography and ~~Film~~ Production.** (Refer to 50.0602)

------ **Photography**. (Refer to 50.0605)

10.0104 **Radio and Television Broadcasting Technology/Technician.** An instructional program that prepares individuals to support broadcast managers and other professionals in performing tasks related to the production of radio and television programs, films, and recordings. Includes instruction in operating specialized equipment.

------ **Radio and Television Broadcasting.** (Refer to 09.0701)

10.0105 Recording Arts Technology/Technician. An instructional program that prepares individuals to record music, dialogue, or sound effects; edit sound tracks; and dub and mix in conjunction with the production of sound, video, and mixed media products.

10.0199 **Communications Technologies/Technicians, Other.** Any instructional program in communications technologies not described above.

11. **COMPUTER AND INFORMATION SCIENCES**. A summary of groups of instructional programs that describe the design, development and operation of electronic data storage and processing systems, including hardware and software.

------ **Computer Engineering**. (Refer to 14.09 Series)

------ **Electrical, Electronics and Communications Engineering**. (Refer to 14.10 Series)

------ **Systems Engineering.** (Refer to 14.27 Series)

------ **Electrical, Electronic and Communications Engineering Technology/Technician.** (Refer to 15.0303)

------ **~~Business~~ *Management* Information *Systems and Business* Data Processing Services**. (Refer to 52.12 Series)

11.01 **Computer and Information Sciences, General.** (See 11.0101)

11.0101 **Computer and Information Sciences, General.** An instructional program that generally describes the study of data and information storage and processing systems, including hardware, software, basic design principles, user requirements analysis, and economic and policy issues.

------ **Computer Teacher Education.** (Refer to 13.1321)

------ **~~Business~~ *Management* Information *Systems and Business* Data Processing Services**. (Refer to 52.12 Series)

11.02 **Computer Programming.** (See 11.0201)

11.0201 **Computer Programming.** An instructional program that prepares individuals to apply methods and procedures used in designing and writing computer programs to developing solutions to specific operational problems and use requirements, including testing and trouble-shooting prototype software packages.

------ **Business Computer Programming/Programmer.** (Refer to 52.1202)

11.03 **Data Processing *Technologies/Technicians*.** (See 11.0301)

11.0301 **Data Processing Technology/Technician.** An instructional program that prepares individuals to use and operate computers and associated software packages to perform a variety of tasks, including text processing, number processing, graphics, and data base management.

------ **Medical Records Technology/Technician.** (Refer to 51.0707)

------ **Information Processing/Data Entry Technician.** (Refer to 52.0407)

11.04 **Information Sciences and Systems**. (See 11.0401)

11.0401 **Information Sciences and Systems.** An instructional program that describes the scientific study and development of electronic systems for transmitting information via signaling networks, and the study of information transmission from the point of generation to reception and human interpretation. Includes instruction in information systems planning and design, user needs analysis, and provider capacity and requirements analysis.

------ **Business Systems Networking *(LAN/WAN)* and Telecommunications.** (Refer to 52.1204)

11.05 **Computer Systems Analysis.** (See 11.0501)

11.0501 **Computer Systems Analysis.** An instructional program that prepares individuals to apply computer programming principles to the design and implementation of large-scale computer applications and networking systems. Includes instruction in system design, user prioritization, system and component optimization, and computer security systems.

------ **Business Systems Analysis and Design.** (Refer to 52.1203)

11.07 **Computer Science**. (See 11.0701)

11.0701 **Computer Science**. An instructional program that describes the scientific and mathematical study of the algorithms used in designing and building computers, and their application to the development and design of actual computing systems. Includes instruction in computer architecture, assembly and programming languages, numerical and computational analysis, computer systems theory, artificial intelligence and cybernetics, and simulation and modeling.

------ **Computer Teacher Education.** (Refer to 13.1321)

------ **Computer Engineering.** (Refer to 14.0901)

------ **Electrical, Electronics and Communications Engineering.** (Refer to 14.1001)

------ **Systems Engineering.** (Refer to 14.2701)

11.99 **Computer and Information Sciences, Other**. (See 11.9999)

11.9999 **Computer and Information Sciences, Other.** Any instructional program in computer and information sciences not described above.

12. **PERSONAL AND MISCELLANEOUS SERVICES.** A summary of instructional programs that prepare individuals to provide a variety of services to individual consumers as well as to organizations such as businesses and industries.

12.02 **Gaming and Sports Officiating Services.** A group of instructional programs that prepare individuals to conduct and supervise gaming operations, and officiate at sports events.

12.0203 **Card Dealer/*Games of Chance Attendant*.** An instructional program that prepares individuals to operate card games, perform card tricks, and manage table gaming operations at casinos, night clubs, and other establishments. Includes instruction in the rules and procedures of specific games, and customer relations.

12.0204 **Umpires and Other Sports Officials.** An instructional program that prepares individuals to serve as umpires, judges, and other officials for athletic events and specific sports at the school, college, amateur, and professional levels. Includes instruction in the rules and procedures of specific sports, public relations, and related duties.

12.029 **Gaming and Sports Officiating Services, Other.** Any instructional program in gaming and sports officiating services not described above.

12.03 **Funeral Services and Mortuary Science.** (See 12.0301).

12.0301 **Funeral Services and Mortuary Science.** An instructional program that prepares individuals to perform and supervise the embalming and cremation of human corpses, to provide funeral and burial services, and to sell funerary equipment to the public. Includes instruction in applicable anatomical, cosmetic and technical procedures; facilities and equipment management; equipment and services marketing; legal requirements; and professional standards.

12.04 **Cosmetic Services.** (See 12.0401)

12.0401 **Cosmetic Services, General.** An instructional program that generally prepares individuals to render a variety of beauty and grooming services to the general public.

12.0402 **Barber/Hairstylist.** An instructional program that prepares individuals to cut and care for hair and perform facial shaves, with emphasis on hygiene, sanitation, customer relations and barbershop management.

12.0403 **Cosmetologist/*Esthetician*.** An instructional program that prepares individuals to care for and beautify hair, care for complexions and perform manicures, and sell cosmetics in commercial or other beauty establishments, or independently. Includes instruction in hygiene, sanitation, customer relations, and salon management. May also include training and supervising assistants.

12.0404 **Electrolysis Technician.** An instructional program that prepares individuals to operate specialized equipment for removing scalp hair, whiskers, body hair, warts, moles, and birthmarks from individuals. Includes instruction in equipment use and maintenance, applications to specific treatments, and customer relations.

12.0405 **Massage *(Non-Therapeutic)*.** An instructional program that prepares individuals to administer systematic friction, stroking, tapping, slapping and manipulative movements to the human body for ~~therapeutic or~~ relaxation purposes. Includes instruction in any of the various massage disciplines, basic health and first aid principles, customer/patient relations, and applications to specific physical conditions and problems.

12.0406 **Make-up Artist.** An instructional program that prepares individuals to apply cosmetics, cosmetic devices, masks and other materials to the human face and body, to enhance or alter appearance. Includes instruction in specific treatments such as facials, manicures, waxings, pedicures, and others; related techniques and equipment; applications to specific purposes such as acting, television broadcasting, and private cosmetic services; and customer/client relations.

------ **Technical Theatre/Theatre Design and Stagecraft.** (Refer to 50.0502)

12.0499 **Cosmetic Services, Other.** Any instructional programs in cosmetic services not described above.

12.05 **Culinary Arts and Related Services.** A group of instructional programs that prepare individuals to provide professional food and beverage services in restaurants, bars and other commercial establishments.

------ **Institutional Food Workers and Administrators.** (Refer to 20.04 Series)

------ **Hospitality Services Management.** (Refer to 52.09 Series)

12.0501 **Baker/Pastry Chef.** An instructional program that prepares individuals to serve as professional bakers and pastry specialists in restaurants or other commercial baking establishments. Includes instruction in bread and pastry making, bread and pastry handling and storage, cake and pastry decorating, baking industry operations, product packaging and marketing operations, and counter display and service.

12.0502 **Bartender/Mixologist.** An instructional program that prepares individuals to mix and serve alcoholic and nonalcoholic drinks to patrons of bars or other commercial establishments. Includes instruction in standard recipes, cleanliness and safety standards, legal requirements of alcoholic beverage service, and customer relations.

12.0503 **Culinary Arts/Chef Training.** An instructional program that prepares individuals to provide professional chef and related cooking services in restaurants and other commercial food establishments. Includes instruction in recipe and menu planning, preparing and cooking of foods, supervising and training kitchen assistants, the management of food supplies and kitchen resources, aesthetics of food presentation, and familiarity or mastery of a wide variety of cuisines and culinary techniques.

12.0504 **Food and Beverage/Restaurant Operations Manager.** An instructional program that prepares individuals to manage and supervise food and beverage service operations, including, banquet management, and executive chef positions. Includes instruction in food and beverage cost control, food and beverage purchasing and storage, restaurant and food services operation, personnel supervision and management, menu planning and event coordination, and general management.

12.0505 **Kitchen Personnel/Cook and Assistant Training.** An instructional program that prepares individuals to serve under the supervision of chefs and other food service professionals as kitchen support staff and commercial food preparation workers. Includes instruction in kitchen organization and operations, sanitation and quality control, basic food preparation and cooking skills, kitchen and kitchen equipment maintenance, and quantity food measurement and monitoring.

12.0506 **Meatcutter**. An instructional program that prepares individuals to apply technical knowledge and skills to cut, trim, and prepare carcasses and portions of meat for sale in wholesale, retail, or food-service establishments. Includes instruction in the use of meat-cutting tools; identification of and cutting techniques for different cuts of meat; dressing poultry; processing fish; counter display; and refrigeration and sanitation.

12.0507 **Waiter/Waitress and Dining Room Manager.** An instructional program that prepares individuals to serve food to customers in formal or informal settings. Includes instruction in formal rules of serving etiquette, table and counter service, dining room operations and procedures, service personnel supervision and management, food and beverage preparation and presentation, communication skills, business math and procedures, and sanitation.

12.0599 **Culinary Arts and Related Service, Other.** Any instructional program in culinary arts and related services not described above.

12.99 **Personal and Miscellaneous Services, Other.** (See 12.9999)

12.9999 **Personal and Miscellaneous Services, Other.** Any instructional program in personal and miscellaneous services not described above.

13. **EDUCATION.** A summary of groups of instructional programs that describe the theory and practice of learning and teaching, and related research, administrative and support services.

------ **Psychology**. (Refer to 42. Series)

------ **Social Sciences and History**. (Refer to 45. Series)

13.01 **Education, General**. (See 13.0101).

13.0101 **Education, General.** An instructional program that generally describes the theory and practice of learning and teaching; the basic principles of educational psychology; the art of teaching; the planning and administration of educational activities; and the social foundations of education.

13.02 **Bilingual/Bicultural Education and Teaching.** (See 13.0201).

13.0201 **Bilingual/Bicultural Education and Teaching.** An instructional program that describes the design and provision of teaching and other educational services to bilingual/bicultural children or adults, and/or the design and implementation of educational programs having the goal of producing bilingual/bicultural individuals. Includes preparation to serve as teachers and administrators in bilingual/bicultural education programs.

------ **Teaching English as a Second Language or *Foreign Language*.** (Refer to 13.1401)

------ ***Teaching French as a Second Language or Foreign Language*.** (Refer to ***13.1402***)

13.03 **Curriculum and Instruction**. (See 13.0301).

13.0301 **Curriculum and Instruction.** An instructional program that describes the study of the curriculum and related instructional processes and tools, and that may prepare individuals to serve as professional curriculum specialists. Includes instruction in curriculum theory, curriculum design and planning, instructional material design and evaluation, curriculum evaluation, and applications to specific subject matter, programs or educational levels.

13.04 **Education Administration and Supervision.** (See 13.0401)

13.0401 **Education Administration and Supervision, General.** An instructional program that generally describes the study of the principles and techniques of administering a wide variety of schools and other educational organizations and facilities, supervising educational personnel at the school or staff level, and that may prepare individuals as general administrators and supervisors.

~~13.0402 [**Administration of Special Education**]. An instructional program that describes the principles and techniques of administering educational facilities and programs provided for children or adults with special learning needs, and that prepares individuals to serve as administrators of such programs. Includes instruction in special education principles, program and facilities planning, personnel management, community and client relations, budgeting and administration, professional standards, and applicable laws and policies.~~ (Deleted, included under 13.0401)

13.0403 **Adult and Continuing Education Administration**. An instructional program that describes the principles and techniques of administering programs and facilities designed to serve the basic education needs of undereducated adults, or the continuing education needs of adults Seeking further or specialized instruction, and that prepares individuals to serve as administrators of such programs. Includes instruction in adult education principles, program and facilities planning, personnel management, community and client relations, budgeting and administration, professional standards, and applicable laws and policies.

13.0404 **Educational Supervision**. An instructional program that prepares individuals to supervise instructional and support personnel at the school building, facility or staff level. Includes instruction in the principles of staffing and organization, the supervision of learning activities, personnel relations, administrative duties related to departmental or unit management, and specific applications to various educational settings and curricula.

13.0405 **Elementary, Middle and Secondary Education Administration.** An instructional program that describes the principles and techniques of elementary, middle or secondary school principalship, and that prepares individuals to serve as principals and other administrative personnel for elementary, middle or secondary education programs and facilities. Includes instruction in elementary, middle or secondary-level education, program and facilities planning, personnel management, community and client relations, budgeting and administration, professional standards, and applicable laws and policies.

13.0406 **Higher Education Administration.** An instructional program that describes the principles and practice of administration in four-year colleges, universities and higher education systems, the study of higher education as an object of applied research, and which may prepare individuals to function as administrators in such settings. Includes instruction in higher education economics and finance; policy and planning studies; curriculum; faculty and labor relations; higher education law; college student services; research on higher education; institutional research; marketing and promotion; and issues of evaluation, accountability and philosophy.

~~13.0407~~ ~~**[Community and Junior College Administration]**. An instructional program that describes the principles and techniques of administering community and junior colleges and related postsecondary systems, the study of community and junior colleges as objects of applied research, and that may prepare individuals to function as administrators in such settings. Includes instruction in community and junior college finance; policy and planning studies; curriculum; faculty and labor relations; higher education law; student services; research on community and junior colleges; institutional research; marketing and promotion; and issues of evaluation, accountability and philosophy~~. (Deleted, included under 13.0406)

13.0499 **Education Administration and Supervision, Other.** Any instructional program in education administration and supervision not described above.

13.05 **Educational/Instructional Media Design.** (See 13.0501).

13.0501 **Educational/Instructional Media Design.** An instructional program that describes the principles and techniques of creating instructional products and related educational resources in various formats or combinations such as film, video, recording, text, art, CD-ROM, computer software, virtual reality technology, and three-dimensional objects, and that prepares individuals to function as instructional media designers. Includes instruction in the techniques specific to creating in various media; the behavioral principles applicable to using various media in learning and teaching; the design, testing and production of instructional materials; and the management of educational/instructional media facilities and programs.

13.06 **Educational Evaluation, Research and Statistics.** A group of instructional programs that describe the application of analytical and evaluation methodologies to educational problems and settings.

13.0601 **Educational Evaluation and Research.** An instructional program that describes the principles and procedures for generating information about educational programs, personnel and methods, and the analysis of such information for planning purposes. Includes instruction in evaluation theory, evaluation research design and planning, administering evaluations and related data collection activities, data reporting requirements, data analysis and interpretation, and related economic and policy issues.

13.0603 **Educational Statistics and Research Methods.** An instructional program that describes the application of statistics to the analysis and solution of educational research problems, and the development of technical designs for research studies. Includes instruction in mathematical statistics, research design, computer applications, instrument design, research methodologies, and applications to research problems in specific education subjects.

13.0604 **Educational Assessment, Testing and Measurement.** An instructional program that describes the principles and procedures for designing, developing, implementing and evaluating tests and other mechanisms used to measure learning, evaluate student progress, and assess the performance of specific teaching tools, strategies and curricula. Includes instruction in psychometric measurement, instrument design, test implementation techniques, research evaluation, data reporting requirements, and data analysis and interpretation.

13.0699 **Educational Evaluation, Research and Statistics, Other.** Any instructional program in educational evaluation, research and statistics not described above.

13.07 **International and Comparative Education.** (See 13.0701).

13.0701 **International and Comparative Education.** An instructional program that describes the study of educational phenomena, practices and institutions within different societies and states in comparative perspective, and the study of international educational issues. Includes instruction in comparative research methods, country- or area-specific studies, crossnational studies of learning and teaching styles, international educational policy and development, and analyses of educational migration patterns and experiences.

~~13.08 **[Educational Psychology.]** A group of instructional programs~~ (Moved to 42.18)

~~13.0802 **[Educational Psychology.]** An instructional program that describes the application of psychology to the study of the behavior of individuals in the roles of teacher and learner, the nature and effects of learning environments, and the psychological effects of methods, resources, organization and non-school experience on the educational process. Includes instruction in learning theory, human growth and development, research methods, and psychological evaluation~~. (Moved to 42.1801)

13.09 **Social and Philosophical Foundations of Education.** (See 13.0901).

13.0901 **Social and Philosophical Foundations of Education.** An instructional program that describes the systematic study of education as a social and cultural institution, and the educational process as an object of humanistic inquiry. Includes instruction in such subjects as the philosophy of education, history of education, educational literature, educational anthropology, sociology of education, economics and politics of education, educational policy studies, and studies of education in relation to specific populations, issues, social phenomena, and types of work.

13.10 **Special Education/*Teaching*.** (See 13.1001-13.1099)

13.1001 **Special Education/*Teaching*, General.** An instructional program that generally describes the design and provision of teaching and other educational services to children or adults with special learning needs or disabilities, and that may prepare individuals to function as special education teachers. Includes instruction in diagnosing learning disabilities, developing individual education plans, teaching and supervising special education students, special education counseling, and applicable laws and policies.

13.1003 **Education/*Teaching* of the Deaf and Hearing-Impaired.** An instructional program that describes the study and design of educational services for children or adults with hearing impairments which adversely affect their educational performance, and that may prepare individuals to teach such students. Includes instruction in identifying hearing-impaired students, developing individual education plans, teaching and supervising hearing-impaired students, counseling, and applicable laws and policies.

------ **Audiology/Hearing Sciences**. (Refer to 51.0202)

------ **Sign Language Interpreting.** (Refer to 51.0205)

13.1004 **Education/*Teaching* of the Gifted and Talented**. An instructional program that describes the study and design of educational services for children or adults exhibiting exceptional intellectual, psychomotor or artistic talent or potential, or who exhibit exceptional maturity or social leadership talents, and that may prepare individuals to teach such students. Includes instruction in identifying gifted and talented students, developing individual education plans, teaching and supervising gifted and talented students, counseling, and applicable laws and policies.

13.1005 **Education/*Teaching* of the Emotionally Handicapped**. An instructional program that describes the study and design of educational services for children or adults with emotional conditions which adversely affect their educational performance and that may prepare individuals to teach such students. Includes instruction in identifying emotionally disturbed students, developing individual education plans, teaching and supervising emotionally disturbed students, counseling, and applicable laws and policies.

13.1006 **Education/*Teaching* of the Mentally Handicapped**. An instructional program that describes the study and design of educational services for children or adults with mental disabilities which adversely affect their educational performance and that may prepare individuals to teach such students. Includes instruction in identifying mentally handicapped students, developing individual education plans, teaching and supervising mentally handicapped students, counseling, and applicable laws and policies.

13.1007 **Education/*Teaching* of the Multiple Handicapped**. An instructional program that describes the study and design of educational services for children or adults with multiple disabilities which adversely affect their educational performance and that may prepare individuals to teach such students. Includes instruction in identifying multiple handicapped students, developing individual education plans, teaching and supervising multiple handicapped students, counseling, and applicable laws and policies.

13.1008 **Education/*Teaching* of the Physically Handicapped**. An instructional program that describes the study and design of educational services for children or adults with physical disabilities which adversely affect their educational performance and that may prepare individuals to teach such students. Includes instruction in identifying physically disabled students, developing individual education plans, teaching and supervising physically disabled students, counseling, and applicable laws and policies.

13.1009 **Education/*Teaching* of the Blind and Visually Handicapped**. An instructional program that describes the study and design of educational services for children or adults with visual disabilities which adversely affect their educational performance and that may prepare individuals to teach such students. Includes instruction in identifying visually handicapped students, developing individual education plans, teaching and supervising blind or visually handicapped students, counseling, and applicable laws and policies.

13.1011 **Education/*Teaching* of the Specific Learning Disabled**. An instructional program that describes the study and design of educational services for children or adults with specific learning disabilities which adversely affect their educational performance and that may prepare individuals to teach such students. Includes instruction in identifying specific learning disabled students, developing individual education plans, teaching and supervising students with specific learning disabilities students, counseling, and applicable laws and policies.

13.1012 **Education/*Teaching* of the Speech Impaired**. An instructional program that describes the study and design of educational services for children or adults with speech impairments which adversely affect their educational performance and that may prepare individuals to teach such students. Includes instruction in identifying speech impaired students, developing individual education plans, teaching and supervising students with speech disabilities, counseling, and applicable laws and policies.

------ **Speech-Language Pathology**. (Refer to 51.0203)

13.1013 **Education/*Teaching* of the Autistic**. An instructional program that describes the study and design of educational services for children or adults that is autistic, and that prepares individuals to teach such students. Includes instruction in identifying students with autism, developing individual education plans, teaching and supervising autistic students, counseling, and applicable laws and policies.

13.1099 **Special Education/*Teaching*, Other**. Any instructional program in special education not described above.

13.11 **Student Counseling and Personnel Services.** (See 13.1101).

13.1101 **Counselor Education/Student Counseling and Guidance Services.** An instructional program that prepares individuals to apply the theory and principles of guidance and counseling to the provision of support for the personal, social, educational, and vocational development of students, and the organizing of guidance services within elementary, middle and secondary educational institutions. Includes instruction in legal and professional requirements, therapeutic counselor intervention, vocational counseling, and related sociological and psychological foundations.

13.1102 **College/Postsecondary Student Counseling and Personnel Services.** An instructional program that describes the organization and provision of counseling, Referral, assistance and administrative services to students in postsecondary educational institutions and adult education facilities, and that may prepare individuals to function as professional counselors in such settings. Includes instruction in applicable laws and policies, residential counseling and services, vocational counseling and placement services, remedial skills counseling, and therapeutic counselor intervention.

13.12 **General Teacher Education**. A group of instructional programs that prepares individuals to teach at various educational levels.

13.1201 **Adult and Continuing Teacher Education.** An instructional program that prepares individuals to teach adult students in various settings, including basic and remedial education programs, continuing education programs, and programs designed to develop or upgrade specific employment-related knowledge and skills.

13.1202 **Elementary Teacher Education**. An instructional program that prepares individuals to teach students in the elementary grades, which may include kindergarten through grade eight, depending on the school system or state regulations. Includes preparation to teach all elementary education subject matter.

13.1203 **Junior High/Intermediate/Middle School Teacher Education**. An instructional program that prepares individuals to teach students in the middle, intermediate or junior high grades, which may include grades four through nine by regulation.

13.1204 **Pre-Elementary/Early Childhood/Kindergarten Teacher Education**. An instructional program that prepares individuals to teach students ranging in age from infancy through eight years (grade three), depending on the school system or state regulations. Includes preparation to teach all relevant subject matter.

13.1205 **Secondary Teacher Education**. An instructional program that prepares individuals to teach students in the secondary grades, which may include grades seven through twelve, depending on the school system or state regulations. May include preparation to teach a comprehensive curriculum or specific subject matter.

13.1206 **Teacher Education, Multiple Levels.** An instructional program that prepares individuals to teach students at more than one educational level, such as a combined program in elementary/secondary, early childhood/elementary, elementary/middle school, or junior high/high school teacher education.

13.1207 Montessori Teacher Education (Multiple Levels). An instructional program that prepares individuals to teach students at various grade levels according to the pedagogical principles and methods developed by Maria Montessori and her followers.

13.1208 Waldorf/Steiner Teacher Education (Multiple Levels). An instructional program that prepares individuals to teach students at various grade levels according to the pedagogical principles and methods developed by Rudolf Steiner and his followers.

13.1299 **General Teacher Education, Other**. Any instructional program in general teacher education not described above.

13.13 **Teacher Education, Specific Academic and Vocational Programs.** A group of instructional programs that prepare individuals to teach subject matter in specific academic and vocational programs at various educational levels.

13.1301 **Agricultural Teacher Education.** An instructional program that prepares individuals to teach vocational agricultural programs at various educational levels.

------ **Agriculture/Agricultural Sciences, General.** (Refer to 02.0101)

13.1302 **Art Teacher Education.** An instructional program that prepares individuals to teach art and art appreciation programs at various educational levels.

------ **Art, General.** (Refer to 50.0701)

13.1303 **Business Teacher Education.** An instructional program that prepares individuals to teach vocational business programs at various educational levels.

------ **BUSINESS MANAGEMENT AND ADMINISTRATIVE SERVICES.** (Refer to 52. Series)

13.1304 **Driver and Safety Teacher Education**. An instructional program that prepares individuals to teach driver and safety education programs at various educational levels.

13.1305 **English Teacher Education**. An instructional program that prepares individuals to teach English grammar, composition and literature programs at various educational levels.

------ **English Language and Literature, General**. (Refer to 23.0101)

13.1306 **Foreign Languages Teacher Education, *Other than French , German or Spanish*.** An instructional program that prepares individuals to teach foreign languages programs at various educational levels, other than French, German or Spanish.

------ **Foreign Languages and Literatures, General**. (Refer to 16.0101)

13.1307 **Health Teacher Education**. An instructional program that prepares individuals to teach health education programs at various educational levels.

------ **Health and Physical Education, General**. (Refer to 31.0501)

13.1308 ***Family and Consumer Sciences*/Home Economics Teacher Education**. An instructional program that prepares individuals to teach vocational home economics programs at various educational levels.

------ ***Family and Consumer Sciences*/Home Economics, General**. (Refer to 19.0101)

------ ***VOCATIONAL FAMILY AND CONSUMER SCIENCES/* VOCATIONAL HOME ECONOMICS.** (Refer to entire 20. Series, in **CHAPTERS I and II.**)

13.1309 **Technology Teacher Education/Industrial Arts Teacher Education**. An instructional program that prepares individuals to teach technology education/industrial arts programs at various educational levels.

------ **Technology Education/Industrial Arts**. (Refer to 21.0101, **CHAPTER III**)

13.1310 ***Sales and* Marketing Operations Teacher Education/Marketing and Distributive Teacher Education.** An instructional program that prepares individuals to teach vocational sales and marketing operations/marketing and distributive education programs at various educational levels.

------ ***SALES AND* MARKETING OPERATIONS/MARKETING AND DISTRIBUTION.** (Refer to 08. Series)

13.1311 **Mathematics Teacher Education**. An instructional program that prepares individuals to teach mathematics programs at various educational levels.

------ **Mathematics.** (Refer to 27. Series)

13.1312 **Music Teacher Education.** An instructional program that prepares individuals to teach music and music appreciation programs at various educational levels.

------ **Music, General**. (Refer to 50.09 Series)

13.1314 **Physical Education Teaching and Coaching**. An instructional program that prepares individuals to teach physical education programs and/or to coach sports at various educational levels.

------ **Health and Physical Education, General**. (Refer to 31.0501)

13.1315 **Reading Teacher Education**. An instructional program that prepares individuals to diagnose reading difficulties and to teach reading programs at various educational levels.

13.1316 **Science Teacher Education, General**. An instructional program that prepares individuals to teach general science programs, or a combination of the biological and physical science subject matter areas, at various educational levels.

------ **Biological and Physical Sciences**. (Refer to 30.0101)

13.1317 **Social Science Teacher Education**. An instructional program that prepares individuals to teach specific social science subjects and programs at various educational levels.

------ **Psychology, General**. (Refer to 42.0101)

------ **Anthropology**. (Refer to 45.0201)

------ **Archaeology**. (Refer to 45.0301)

------ **Economics, General**. (Refer to 45.0601)

------ **Political Science, General.** (Refer to 45.1001)

------ **Sociology**. (Refer to 45.1101)

13.1318 **Social Studies Teacher Education.** An instructional program that prepares individuals to teach general social studies programs at various educational levels.

------ **Social Sciences, General**. (Refer to 45.0101)

13.1319 **Technical Teacher Education.** An instructional program that prepares individuals to teach specific vocational technical education programs at various educational levels.

------ **Forest Production and Processing**. (Refer to 03.04 Series)

------ **ENGINEERING-RELATED TECHNOLOGIES**. (Refer to 15. Series)

------ **SCIENCE TECHNOLOGIES**. (Refer to 41. Series)

13.1320 **Trade and Industrial Teacher Education.** An instructional program that prepares individuals to teach specific vocational trades and industries programs at various educational levels.

------ **PERSONAL AND MISCELLANEOUS SERVICES.** (Refer to 12. Series)

------ **PROTECTIVE SERVICES.** (Refer to 43. Series)

------ **CONSTRUCTION TRADES**. (Refer to 46. Series)

------ **MECHANICS AND REPAIRERS**. (Refer to 47. Series)

------ **PRECISION PRODUCTION AND MANUFACTURING.** (Refer to 48. Series)

------ **TRANSPORTATION AND MATERIAL MOVING.** (Refer to 49. Series)

------ **VISUAL AND PERFORMING ARTS**. (Refer to 50.Series)

13.1321 **Computer Teacher Education**. An instructional program that prepares individuals to teach computer education programs at various educational levels.

------ **Computer and Information Sciences, General**. (Refer to 11.0101)

13.1322 **Biology Teacher Education**. An instructional program that prepares individuals to teach biology programs at various educational levels.

------ **Biology, General**. (Refer to 26.0101)

13.1323 **Chemistry Teacher Education**. An instructional program that prepares individuals to teach chemistry programs at various educational levels.

------ **Chemistry, General.** (Refer to 40.0501)

13.1324 **Drama and Dance Teacher Education.** An instructional program that prepares individuals to teach drama and/or dance programs at various educational levels.

------ **Dance.** (Refer to 50.0301)

------ **Drama/Theatre Arts, General**. (Refer to 50.0501)

13.1325 **French Language Teacher Education**. An instructional program that prepares individuals to teach French language programs at various educational levels.

------ **French Language and Literature**. (Refer to 16.0901)

13.1326 **German Language Teacher Education**. An instructional program that prepares individuals to teach German language programs at various educational levels.

------ **German Language and Literature**. (Refer to 16.0501)

13.1327 **Health Occupations Teacher Education.** An instructional program that prepares individuals to teach specific vocational health occupations programs at various educational levels.

------ **Community Health ~~Services~~ Liaisons.** (Refer to 51.03 Series)

------ **Dental Services**. (Refer to 51.06 Series)

------ **Health and Medical Administrative Services**. (Refer to 51.07 Series)

------ **Health and Medical Assistants**. (Refer to 51.08 Series)

------ **Health and Medical Diagnostic and Treatment Services**. (Refer to 51.09 Series)

------ **Health and Medical Laboratory Technologies**. (Refer to 51.10 Series)

------ **Mental Health Services**. (Refer to 51.15 Series)

------ **Nursing**. (Refer to 51.16 Series)

------ **Miscellaneous Health Aides.** (Refer to 51.26)

13.1328 **History Teacher Education.** An instructional program that prepares individuals to teach history programs at various educational levels.

------ **SOCIAL SCIENCES AND HISTORY.** (Refer to 45. Series)

13.1329 **Physics Teacher Education.** An instructional program that prepares individuals to teach physics programs at various educational levels.

------ **Physics, General**. (Refer to 40.08 Series)

13.1330 **Spanish Language Teacher Education**. An instructional program that prepares individuals to teach Spanish language programs at various educational levels.

------ **Spanish Language and Literature.** (Refer to 16.0905)

13.1331 **Speech Teacher Education**. An instructional program that prepares individuals to teach speech and language arts programs at various educational levels.

------ **Speech and Rhetorical Studies**. (Refer to 23.1001)

13.1332 Geography Teacher Education. An instructional program that prepares individuals to teach geography at various educational levels.

------ **Geography.** (Refer to 45.0701)

13.1399 **Teacher Education, Specific Academic and Vocational Programs, Other.** Any instructional program in teacher education, specific academic and vocational programs not described above.

13.14 **Teaching English or French as a Second *or Foreign* Language.** (See 13.1401-13.1402).

13.1401 **Teaching English as a Second *or Foreign* Language**. An instructional program that describes the principles and practice of teaching English to students who are not proficient in it or who do not speak, read or write English, and that may prepare individuals to function as teachers and administrators in such programs.

13.1402 Teaching French as a Second or Foreign Language. An instructional program that describes the principles and practice of teaching French to students who are not proficient in it or who do not speak, read or write French, and that may prepare individuals to function as teachers and administrators in such programs.

------ **Bilingual/Bicultural Education and Teaching**. (Refer to 13.0201)

13.15 **Teacher Assistant/Aide.** (See 13.1501-13.1502)

13.1501 **Teacher Assistant/Aide**. An instructional program that prepares individuals to assist a teacher in regular classroom settings or in providing instruction and supervision to special student populations, such as bilingual/bicultural students, special education students, adult learners, and students learning English. Includes instruction in techniques of general classroom supervision, maintaining order, assisting with lessons and carrying out related assignments.

13.1502 Adult Literacy Tutor. An instructional program that prepares individuals to serve as volunteer, peer, or professional tutors for adult literacy learners.

13.99 **Education, Other**. (See 13.9999)

13.9999 **Education, Other.** Any instructional program in education not described above.

14. **ENGINEERING**. A summary of groups of instructional programs that prepares individuals to apply mathematical and scientific principles to the solution of practical problems for the benefit of society.

14.01 **Engineering, General**. (See 14.0101).

------ **Mathematics.** (Refer to 27. Series)

------ **Physical Sciences**. (Refer to 40. Series)

14.0101 **Engineering, General**. An instructional program that generally prepares individuals to apply mathematical and scientific principles to solve a wide variety of practical problems in industry, social organization, public works, and commerce.

------ **Engineering-~~Related~~ Technology/Technician, General**. (Refer to 15.1101)

14.02 **Aerospace, Aeronautical and Astronautical Engineering.** (See 14.0201).

14.0201 **Aerospace, Aeronautical and Astronautical Engineering.** An instructional program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of aircraft, space vehicles, and their systems; applied research on flight characteristics; and the development of systems and procedures for the launching, guidance, and control of air and space vehicles.

------ **Aeronautical and Aerospace Engineering Technology/Technician.** (Refer to 15.0801)

14.03 **Agricultural Engineering**. See 14.0301).

14.0301 **Agricultural Engineering**. An instructional program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of systems, equipment and facilities used to produce, process and store agricultural products; to improve the productivity of agricultural methods; and to develop improved agricultural biological systems.

------ **Food Sciences and Technology.** (Refer to 02.0301)

14.04 **Architectural Engineering.** (See 14.0401).

14.0401 **Architectural Engineering.** An instructional program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of materials, systems, and methods used to construct and equip buildings intended for human habitation or other purposes.

------ **Architecture**. (Refer to 04.01 Series)

------ **Architectural Engineering Technology/Technician**. (Refer to 15.0101)

14.05 **Bioengineering and Biomedical Engineering**. (See 14.0501).

14.0501 **Bioengineering and Biomedical Engineering.** An instructional program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of biological and health systems and products such as integrated biological systems, instrumentation, medical information systems, artificial organs and prostheses, and health management and care delivery systems.

------ **Bio~~medical~~ Engineering~~-Related~~ Technology/Technician**. (Refer to 15.0401)

------ **Environmental Control Technologies**. (Refer to 15.05 Series)

------ **Occupational Safety and Health Technology/Technician**. (Refer to 15.0701)

------ **Biotechnology Research**. (Refer to 26.0616)

------ **Biological Technology/Technician**. (Refer to 41.0101 Series)

------ **HEALTH SCIENCES AND ALLIED HEALTH SERVICES**. (Refer to 51.Series)

14.06 **Ceramic Sciences and Engineering**. (See 14.0601).

14.0601 **Ceramic Sciences and Engineering.** An instructional program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of inorganic non-metallic materials, such as porcelains, cements industrial ceramics, ceramic superconductors, abrasive, and related materials and systems.

14.07 **Chemical Engineering**. (See 14.0701).

14.0701 **Chemical Engineering**. An instructional program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of systems employing chemical processes, such as chemical reactors, kinetic systems, electrochemical systems, energy conservation processes, heat and mass transfer systems, and separation processes; and the applied analysis of chemical problems such as corrosion, particle abrasion, energy loss, pollution, and fluid mechanics.

------ **Chemistry**. (Refer to 40.05 Series)

------- **Chemical Technology/Technician**. (Refer to 41.0301)

14.08 **Civil Engineering**. (See 14.0801-14.0899).

14.0801 **Civil Engineering, General**. An instructional program that generally prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of structural, load-bearing, material moving, transportation, water resource, and material control systems; and environmental safety measures.

------ **Civil Engineering/Civil Technology/Technician.** (Refer to15.0201)

~~14.0802 **[Geotechnical Engineering.]** An instructional program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of systems for manipulating and controlling surface and subsurface features at or incorporated into structural sites, including earth and rock moving and stabilization, land fills, structural use and environmental stabilization of wastes and by-products, underground construction, and groundwater and hazardous material containment~~. (Deleted, included under 14.0801)

~~14.0803 **[Structural Engineering.]** An instructional program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of materials and systems used in building load-bearing structures for various purposes and in different environments, including buildings, roads, rail lines, bridges, dams, conduits, offshore platforms and work stations, and other structural shells; and the analysis of structural problems such as, failure, fabrication, safety, and natural hazards~~. (Deleted, included under 14.0801)

------ **Construction/Building Technology/Technician.** (Refer to 15.1001)

14.0804 **Transportation and Highway Engineering.** An instructional program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of total systems for the physical movement of people, materials and information, including general network design and planning, facilities planning, site evaluation, transportation management systems, needs projections and analysis, and analysis of costs.

14.0805 **Water Resources Engineering.** An instructional program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of systems for collecting, storing, moving, conserving and controlling surface- and groundwater, including water quality control, water cycle management, management of human and industrial water requirements, water delivery, and flood control.

14.0899 **Civil Engineering, Other**. Any instructional program in civil engineering not described above.

14.09 **Computer Engineering, *General*.** (See 14.0901).

14.0901 **Computer Engineering, *General*.** An instructional program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of computer hardware and software systems and related equipment and facilities; and the analysis of specific problems of computer applications to various tasks.

------ **Computer Science.** (Refer to 11.0701)

------ **Computer Engineering Technology/Technician**. (Refer to 15.1201)

------ **Computer Maintenance Technology/Technician**. (Refer to15.0402)

14.0902 Computer Hardware Engineering. (Definition to be developed – suggestions welcome)

14.0903 Computer Software Engineering. (Definition to be developed – suggestions welcome)

14.0999 Computer Engineering, Other . Any instructional program in computer engineering not described above.

14.10 **Electrical, Electronics and Communications Engineering**. (See 14.1001)

14.1001 **Electrical, Electronics and Communications Engineering**. An instructional program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of electrical, electronic and related communications systems and their components, including electrical power generation systems; and the analysis of problems such as superconductor, wave propagation, energy storage and retrieval, and reception and amplification.

------ **Electrical, Electronic and Communications Engineering Technology/Technician.** (Refer to 15.0303)

14.11 **Engineering Mechanics**. (See 14.1101).

14.1101 **Engineering Mechanics.** An instructional program that generally describes the application of the mathematical and scientific principles of classical mechanics to the analysis and evaluation of the behavior of structures, forces and materials in engineering problems. Includes instruction in statics, kinetics, dynamics, kinematics, celestial mechanics, stress and failure, and electromagnetism.

14.12 **Engineering Physics.** (See 14.1201).

14.1201 **Engineering Physics.** An instructional program that generally describes the application of the mathematical and scientific principles of physics to the analysis and evaluation of engineering problems. Includes instruction in high- and low-temperature phenomena, computational physics, superconductivity, applied thermodynamics, molecular and particle physics applications, and space science research.

14.13 **Engineering Science**. (See 14.1301).

14.1301 **Engineering Science.** An instructional program that generally describes the application of various combinations of mathematical and scientific principles to the analysis and evaluation of engineering problems, including applied research in human behavior, statistics, biology, chemistry, the earth and planetary sciences, atmospherics and meteorology, and computer applications.

14.14 **Environmental/Environmental Health Engineering.** (See 14.1401).

14.1401 **Environmental/Environmental Health Engineering.** An instructional program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of systems for controlling contained living environments and for monitoring and controlling factors in the external natural environment, including pollution control, waste and hazardous material disposal, health and safety protection, conservation, life support, and requirements for protection of special materials and related work environments.

------ **Environmental Control Technologies.** (Refer to 15.05 Series)

------ **Quality Control and Safety Technologies**. (Refer to 15.07 Series)

14.15 **Geological Engineering *and Geophysical Engineering*.** (See 14.1501).

14.1501 **Geological Engineering *and Geophysical Engineering*.** An instructional program that prepares individuals to apply mathematical and geological principles to the analysis and evaluation of engineering problems, including the geological evaluation of construction sites, the analysis of geological forces acting on structures and systems, the analysis of potential natural resource recovery sites, and applied research on geological phenomena.

----- **Geology**. (Refer to 40.0601)

~~14.16 **[Geophysical Engineering.]** A group of instructional programs. (See 14.1601).~~ (Deleted, included under 14.15)

~~14.1601 **[Geophysical Engineering.]** An instructional program that prepares individuals to apply mathematical, geophysical and planetary principles to the analysis and evaluation of engineering problems, including gravitational and magnetic forces, time and space factors, celestial mass and motion, and their relation to questions of control, movement, function and design in earthbound and space systems.~~ (Deleted, included under 14.1501)

------ **Geophysics and Seismology.** (Refer to 40.0603)

------ **Earth and Planetary Sciences**. (Refer to 40.0703)

14.17 *Industrial/~~Manufacturing~~ Engineering. (See 14.1701) (Manufacturing Engineering Moved to 14.35)*

14.1701 *Industrial/~~Manufacturing~~ Engineering. (Definition to be developed – suggestions welcome) (Manufacturing Engineering Moved to 14.3501)*

----- *Industrial/~~Manufacturing~~ Technology/Technician. (Refer to 15.0603)*

14.18 **Materials Engineering** (See 14.1801).

14.1801 **Materials Engineering.** An instructional program that prepares individuals to apply mathematical and materials science principles to the design, development and operational evaluation of materials and related processes used in manufacturing in a wide variety of settings; the synthesis of new industrial materials, including marrying and bonding composites; analysis of materials requirements and specifications; and related problems of system design dependent on materials factors.

------ **Materials Science**. (Refer to 14.3101)

14.19 **Mechanical Engineering.** (See 14.1901).

14.1901 **Mechanical Engineering.** An instructional program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of physical systems used in manufacturing and end-product systems used for specific uses, including machine tools, jigs and other manufacturing equipment; stationary power units and appliances; engines; self-propelled vehicles; housings and containers; hydraulic and electric systems for controlling movement; and the integration of computers and remote control with operating systems.

14.20 **Metallurgical Engineering.** (See 14.2001).

14.2001 **Metallurgical Engineering.** An instructional program that prepares individuals to apply mathematical and metallurgical principles to the design, development and operational evaluation of metal components of structural, load-bearing, power, transmission, and moving systems; and the analysis of engineering problems such as stress, creep, failure, alloy behavior, environmental fluctuations, stability, electromagnetic and thermodynamic characteristics, optimal manufacturing processes, and related design considerations.

------ **Metallurgical Technology/Technician**. (Refer to 15.0611)

14.21 **Mining and Mineral Engineering.** (See 14.2101).

14.2101 **Mining and Mineral Engineering.** An instructional program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of mineral extraction, processing and refining systems, including open pit and shaft mines, prospecting and site analysis equipment and instruments, environmental and safety systems, mine equipment and facilities, mineral processing and refining methods and systems, and logistics and communications systems.

------ **Mining Technology/Technician.** (Refer to 15.0901)

14.22 **Naval Architecture and Marine Engineering.** (See 14.2201).

14.2201 **Naval Architecture and Marine Engineering.** An instructional program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of self-propelled, stationary, or towed vessels operating on or under the water, including inland, coastal and ocean environments; and the analysis of related engineering problems such as corrosion, power transfer, pressure, hull efficiency, stress factors, safety and life support, environmental hazards and factors, and specific use requirements.

14.23 **Nuclear Engineering.** (See 14.2301).

14.2301 **Nuclear Engineering.** An instructional program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of systems for controlling and manipulating nuclear energy, including nuclear power plant design, fission reactor design, fusion reactor design, reactor control and safety systems design, power transfer systems, containment vessels and structures design; and the analysis of related engineering problems such as fission and fusion processes, human and environmental factors, construction, and operational considerations.

------ **Nuclear Physics.** (Refer to 40.0806)

------ **Nuclear/Nuclear Power Technology/Technician.** (Refer to 41.0205)

14.24 **Ocean Engineering**. (See 14.2401)

14.2401 **Ocean Engineering**. An instructional program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of systems to monitor, control, manipulate and operate within coastal or ocean environments, such as underwater platforms, flood control systems, dikes, hydroelectric power systems, tide and current control and warning systems, and communications equipment; the planning and design of total systems for working and functioning in water or underwater environments; and the analysis of related engineering problems such as the action of water properties and behavior on physical systems and people, tidal forces, current movements, and wave motion.

------ **Oceanography**. (Refer to 40.0702)

14.25 **Petroleum Engineering.** (See 14.2501).

14.2501 **Petroleum Engineering.** An instructional program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of systems for locating, extracting, processing and refining crude petroleum and natural gas, including prospecting instruments and equipment, mining and drilling systems, processing and refining systems and facilities, storage facilities, transportation systems, and related environmental and safety systems.

------ **Petroleum Technology/Technician.** (Refer to 15.0903)

14.27 **Systems Engineering.** (See 14.2701).

14.2701 **Systems Engineering.** An instructional program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of total systems solutions to a wide variety of engineering problems, including the integration of human, physical, energy, communications, management, and information requirements as needed, and the application of requisite analytical methods to specific situations.

------ **Computer Science.** (Refer to 11.0701)

------ **Systems Science and Theory.** (Refer to 30.0601)

14.28 **Textile Sciences and Engineering.** (See 14.2801).

14.2801 **Textile Sciences and Engineering.** An instructional program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of systems to test and manufacture fibers and fiber products, both synthetic and natural; to develop new and improved fibers, textiles and their uses; and to the analysis of related engineering problems such as structural factors, molecular synthesis, chemical manufacturing, weaves, strength and stress, useful life, dyes, and applications to composite systems.

~~14.29 **[Engineering Design.]** A group of instructional programs. (See 14.2901)~~ (Deleted)

~~14.2901 **[Engineering Design.]** An instructional program that prepares individuals to apply mathematical and scientific principles to engineering problems involving marrying or coordinating multiple dissimilar systems to carry out single functions or achieve common purposes, organizing system components for maximum flexibility and utility, planning engineering projects involving multiple tasks and design solutions, planning design testing and evaluation procedures, resolving specification and requirement conflicts, and choosing among competing theoretical solutions~~. (Deleted)

------ **Industrial Design.** (Refer to 50.0404)

14.30 Engineering/~~Industrial~~ Management. (See 14.3001)

14.3001 Engineering/~~Industrial~~ Management. An instructional program that describes the application of engineering principles to the planning and operational management of enterprises and organizations, including budgeting, costing, quality control, efficient resource allocation and utilization, product production and distribution, human resource management, systems and plant maintenance, scheduling, storage and security, organization planning, acquisitions, and logistics. **(Industrial Management, Moved to 15.0613)**

------ **Business Administration and Management.** (Refer to 52.02 Series)

14.31 **Materials Science.** (See 14.3101)

14.3101 **Materials Science**. An instructional program that generally describes the application of mathematical and scientific principles to the analysis and evaluation of the characteristics and behavior of solids, including internal structure, chemical properties, transport and energy flow properties, thermodynamics of solids, stress and failure factors, chemical transformation states and processes, compound materials, and research on industrial applications of specific materials.

------ **Materials Engineering.** (Refer to 14.1801)

14.32 **Polymer/Plastics Engineering.** (See 14.3201)

14.3201 **Polymer/Plastics Engineering.** An instructional program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of synthesized macromolecular compounds and their application to specific engineering uses, including the development of industrial materials with tailored properties, the design of lightweight structural components, the use of liquid or solid polymers, and the analysis and control of polymerization processes.

------ **Plastics Technology/Technician.** (Refer to 15.0607)

------ **Polymer Chemistry.** (Refer to 40.0507)

14.33 Construction Engineering. (See 14.3301)

14.3301 Construction Engineering. (Definition to be developed – suggestions welcome)

14.34 Forest Engineering. (See 14.3401)

14.3401 Forest Engineering. (Definition to be developed – suggestions welcome)

14.35 Manufacturing Engineering. (See 14.3501)

14.3501 Manufacturing Engineering. (Definition to be developed – suggestions welcome)

14.36 Surveying Engineering. (See 14.3601)

14.3601 Surveying Engineering. (Definition to be developed – suggestions welcome)

14.99 **Engineering, Other.** (See 14.9999)

14.9999 **Engineering, Other.** Any instructional program in engineering not described above.

15. **ENGINEERING~~-RELATED~~ TECHNOLOGIES/*TECHNICIANS*.** A summary of groups of instructional programs that prepare individuals to apply basic engineering principles and technical skills in support of engineering and related projects.

------ **ENGINEERING.** (Refer to 14. Series)

15.01 **Architectural Engineering *Technologies/Technicians*.** (See 15.0101)

15.0101 **Architectural Engineering Technology/Technician.** An instructional program that prepares individuals to apply basic engineering principles and technical skills in support of architects, engineers and planners engaged in designing and developing buildings, urban complexes, and related systems. Includes instruction in design testing procedures, building site analysis, model building and computer graphics, engineering drawing, structural systems testing, analysis of prototype mechanical and interior systems, test equipment operation and maintenance, and report preparation.

15.02 **Civil Engineering/~~Civil~~ *Technologies/Technicians*.** (See 15.0201)

15.0201 **Civil Engineering/~~Civil~~ Technology/Technician.** An instructional program that prepares individuals to apply basic engineering principles and technical skills in support of civil engineers engaged in designing and executing public works projects such as highways, dams, bridges, tunnels and other facilities. Includes instruction in site analysis, structural testing procedures, field and laboratory testing procedures, plan and specification preparation, test equipment operation and maintenance, and report preparation.

15.03 **Electrical ~~and Electronic~~ Engineering~~-Related~~ *Technologies/Technicians*.** A group of instructional programs that prepare individuals to apply basic engineering principles and technical skills in support of engineering, research and industrial applications of electricity, lasers, and computers.

~~15.0301 **[Computer Engineering Technology/Technician.]** An instructional program that prepares individuals to apply basic engineering principles and technical skills in support of computer engineers engaged in designing and developing computer systems and installations. Includes instruction in computer electronics and programming, prototype development and testing, systems installation and testing, solid state and microminiature circuitry, peripheral equipment, and report preparation~~. (Moved to 15.1201)

15.0303 **Electrical, Electronic and Communications Engineering Technology/Technician.** An instructional program that prepares individuals to apply basic engineering principles and technical skills in support of electrical, electronics and communication engineers. Includes instruction in electrical circuitry, prototype development and testing; systems analysis and testing, systems maintenance, instrument calibration, and report preparation.

15.0304 **Laser and Optical Technology/Technician**. An instructional program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in developing and using lasers and other optical for commercial or research purposes. Includes instruction in laser and optical principles, testing and maintenance procedures, safety precautions, specific applications to various tasks, and report preparation.

15.0305 Telecommunications Technology/Technician. (Definition to be developed – suggestions welcome)

15.0399 **Electrical ~~and Electronic~~ Engineering~~-Related~~ Technologies/Technicians, Other.** Any instructional program in electrical and electronic engineering-related technologies not described above.

15.04 **Electromechanical Instrumentation and Maintenance *Technologies/Technicians*.** A group of instructional programs that prepare individuals to apply basic engineering and technical skills in support of engineers and other professionals engaged in developing and using industrial systems relying on electrical power.

15.0401 **Bio~~medical~~ Engineering~~-Related~~ Technology/Technician.** An instructional program that prepares individuals to apply basic engineering principles and technical skills in support of engineers engaged in developing biological or medical systems and products. Includes instruction in instrument calibration, design and installation testing, system safety and maintenance procedures, procurement and installation procedures, and report preparation.

15.0402 **Computer Maintenance Technology/Technician.** An instructional program that prepares individuals to apply basic engineering principles and technical skills in support of professionals who use computer systems. Includes instruction in basic computer design and architecture, programming, problems of specific computer applications, component and system maintenance and inspection procedures, hardware and software problem diagnosis and repair, and report preparation.

------ **Computer Installer and Repairer.** (Refer to 47.0104)

15.0403 **Electromechanical Technology/Technician.** An instructional program that prepares individuals to apply basic engineering principles and technical skills in support of engineers engaged in developing and testing automated, servomechanical, and other electromechanical systems. Includes instruction in prototype testing, manufacturing and operational testing, systems analysis and maintenance procedures, and report preparation.

15.0404 **Instrumentation Technology/Technician.** An instructional program that prepares individuals to apply basic engineering principles and technical skills in support of engineers engaged in developing control and measurement systems and procedures. Includes instruction in instrumentation design and maintenance, calibration, design and production testing and scheduling, automated equipment functions, applications to specific industrial tasks, and report preparation.

------ **Instrument Calibration and Repairer.** (Refer to 47.0401)

15.0405 **Robotics Technology/Technician.** An instructional program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in developing and using robots. Includes instruction in the principles of robotics, design and operational testing, system maintenance and repair procedures, robot computer systems and control language, specific system types and applications to specific industrial tasks, and report preparation.

15.0499 **Electromechanical and Instrumentation and Maintenance Technologies/Technicians, Other.** Any instructional program in electromechanical instrumentation and maintenance technologies not described above.

15.05 **Environmental Control Technologies/*Technicians*.** A group of instructional programs that prepare individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in environmental protection and the development of environmental systems.

15.0501 **~~Heating,~~ Air Conditioning ~~and Refrigeration~~ Technology/Technician.** An instructional program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in developing and using air conditioning, refrigeration, and heating systems. Includes instruction in principles of heating and cooling technology, design and operational testing, inspection and maintenance procedures, installation and operation procedures, and report preparation.

------ **Heating, Air Conditioning and Refrigeration Mechanic and Repairer.** (Refer to 47.0201)

15.0503 **Energy Management and Systems Technology/Technician.** An instructional program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in developing energy-efficient systems or monitoring energy use. Includes instruction in principles of energy conservation, instrumentation calibration, monitoring systems and test procedures, energy loss inspection procedures, energy conservation techniques, and report preparation.

~~15.0505~~ [~~**Solar Technology/Technician.**~~] ~~An instructional program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in developing solar-powered energy systems. Includes instruction in solar energy principles, energy storage and transfer technologies, testing and inspection procedures, system maintenance procedures, and report preparation.~~ (Deleted, included under 15.0599)

15.0506 **Water Quality and Waste~~water Treatment~~ Management and *Recycling* Technology/Technician.** An instructional program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in developing and using water storage, waterpower, and wastewater treatment systems. Includes instruction in water storage, power and/or treatment systems and equipment; testing and inspection procedures; system maintenance procedures; and report preparation.

15.0507 **Environmental/*Hazardous Materials* and Pollution Control Technology/Technician.** An instructional program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in developing and using indoor and outdoor environmental pollution control systems, and in disposing of hazardous materials. Includes instruction in environmental safety principles, biohazard identification, testing and sampling procedures, laboratory techniques, instrumentation calibration, hazardous waste disposal procedures and systems, safety and protection procedures, equipment maintenance, and report preparation.

15.0599 **Environmental Control Technologies/Technicians, Other.** Any instructional program in environmental control technologies not described above.

15.06 **Industrial Production Technologies/*Technicians*.** A group of instructional programs that prepare individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in developing and using industrial processes.

15.0603 Industrial/~~Manufacturing~~ Technology/Technician. (Definition to be developed – suggestions welcome). **(Manufacturing Technology/Technician Moved to 15.0612)**

15.0607 **Plastics Technology/Technician.** An instructional program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in developing and using industrial polymers. Includes instruction in the principles of macromolecular chemistry, polymerization and plastic manufacturing processes and equipment, design and operational testing procedures, equipment maintenance and repair procedures, safety procedures, applications to specific products, and report preparation.

15.0611 **Metallurgical Technology/Technician.** An instructional program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and metallurgists engaged in developing and using industrial metals and manufacturing processes. Includes instruction in principles of metallurgy, related manufacturing systems, laboratory techniques, testing and inspection procedures, instrument calibration, system and equipment maintenance and repair, applications to specific processes, and report preparation.

15.0612 Manufacturing Engineering Technology/Technician. (Definition to be developed – suggestions welcome)

15.0613 Industrial Management. (Definition to be developed – suggestions welcome)

15.0699 **Industrial Production Technologies/Technicians, Other.** Any instructional program in industrial production technologies not described above.

15.07 **Quality Control and Safety Technologies/*Technicians*.** A group of instructional programs that prepare individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in monitoring product quality and the health and safety of the work place.

15.0701 **Occupational Safety and Health Technology/Technician.** An instructional program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in maintaining job-related health and safety standards. Includes instruction in safety engineering principles, inspection and monitoring procedures, testing and sampling procedures, laboratory techniques, applications to specific work environments, and report preparation.

15.0702 **Quality Control Technology/Technician.** An instructional program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in maintaining consistent manufacturing and construction standards. Includes instruction in quality control systems management principles, technical standards applicable to specific engineering and manufacturing projects, testing procedures, inspection procedures, related instrumentation and equipment operation and maintenance, and report preparation.

15.0703 Industrial Safety/Occupational Safety. (Definition to be developed – suggestions welcome)

15.0704 Hazardous Materials Information Systems Technology/Technician.. (Definition to be developed – suggestions welcome)

15.0705 Industrial/Occupational Hygiene. (Definition to be developed - suggestions welcome)

15.0799 **Quality Control and Safety Technologies/Technicians, Other**. Any instructional program in quality control and safety technologies not described above.

15.08 **Mechanical Engineering-~~Related~~ Technologies/*Technicians.*** A group of instructional programs that prepare individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in developing mechanical systems.

15.0801 **Aeronautical and Aerospace Engineering Technology/Technician.** An instructional program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in developing, manufacturing and testing aircraft, spacecraft and their systems. Includes instruction in aircraft/spacecraft systems technology, design and development testing, prototype and operational testing, inspection and maintenance procedures, instrument calibration, test equipment operation and maintenance, and report preparation.

------ **Aviation Systems and Avionics Maintenance Technologist/Technician.** (Refer to 47.0609)

15.0803 **Automotive Engineering Technology/Technician.** An instructional program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in developing, manufacturing and testing self-propelled ground vehicles and their systems. Includes instruction in vehicular systems technology, design and development testing, prototype and operational testing, inspection and maintenance procedures, instrument calibration, test equipment operation and maintenance, and report preparation.

------ **Auto/Automotive Mechanic/Technician.** (Refer to 47.0604)

15.0805 **Mechanical Engineering/Mechanical Technology/Technician.** An instructional program that prepares individuals to apply basic engineering principles and technical skills in support of engineers engaged in the design and development phases of a wide variety of projects involving mechanical systems. Includes instruction in principles of mechanics, applications to specific engineering systems, design testing procedures, prototype and operational testing and inspection procedures, manufacturing system-testing procedures, test equipment operation and maintenance, and report preparation.

15.0899 **Mechanical Engineering-~~Related~~-Technologies/Technicians, Other.** Any instructional program in mechanical engineering-related technologies not described above.

15.09 **Mining and Petroleum Technologies/*Technicians*.** A group of instructional programs that prepare individuals to apply basic principles of engineering and technical skills in support of engineers and other professionals engaged in locating and extracting mineral and petroleum resources.

15.0901 **Mining Technology/Technician.** An instructional program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in the development and operation of mines and related mineral processing facilities. Includes instruction in principles of mineral extraction and related geology, mineral field mapping and site analysis, testing and sampling methods, instrument calibration, assay analysis, test equipment operation and maintenance, mine environment and safety monitoring procedures, mine inspection procedures, and report preparation.

15.0903 **Petroleum Technology/Technician.** An instructional program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in the development and operation of oil and natural gas extraction and processing facilities. Includes instruction in principles of petroleum extraction and related geology, petroleum field mapping and site analysis, testing and sampling methods, instrument calibration, laboratory analysis, test equipment operation and maintenance, environment and safety monitoring procedures for oil/gas fields and facilities, facility inspection procedures, and report preparation.

15.0904 Mining Technology/Technician. (Definition to be developed – suggestions welcome)

15.0999 **Mining and Petroleum Technologies/Technicians, Other.** Any instructional program in mining and petroleum engineering technologies not described above.

15.10 **Construction/Building *Technologies/Technicians*.** (See 15.1001).

15.1001 **Construction/Building Technology/Technician.** An instructional program that prepares individuals to apply basic engineering principles and technical skills in support of engineers, engineering contractors and other professionals engaged in the construction of buildings and related structures. Includes instruction in basic structural engineering principles and construction techniques, building site inspection, site supervision, construction personnel supervision, plan and specification interpretation, supply logistics and procurement, applicable building codes, and report preparation.

------ **Architectural Engineering Technology.** (Refer to 15.0101)

------ **Construction/Building Inspector.** (Refer to 46.0403)

15.11 **Miscellaneous Engineering-~~Related~~ Technologies/*Technicians*.** (See 15.1101-15.1199)

15.1101 **Engineering-~~Related~~ Technology/Technician, General.** An instructional program that generally prepares individuals to apply basic engineering principles and technical skills in support of engineers engaged in a wide variety of projects. Includes instruction in various engineering support functions for research, production, and operations, and applications to specific engineering specialties.

15.1102 **Surveying *and Mapping*.** An instructional program that prepares individuals to apply mathematical and scientific principles to the delineation, determination, planning and positioning of land tracts, land and water boundaries, land contours and features; and the preparation of related maps, charts and reports. Includes instruction in applied geodesy, computer graphics, photointerpretation, plane and geodetic surveying, mensuration, traversing, survey equipment operation and maintenance, instrument calibration, and basic cartography.

15.1103 **Hydraulics Technology/Technician.** An instructional program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in developing and using fluid power and transportation systems. Includes instruction in fluid mechanics and hydraulics principles, fluid power systems, pipeline and pumping systems, design and operational testing, inspection and maintenance procedures, related instrumentation, and report preparation.

15.12 Computer Engineering Technologies/Technicians (Definition to be developed - suggestions welcome.)

15.1201 Computer Engineering Technology/Technician, General (Definition to be developed – suggestions welcome)

15.1202 Computer Hardware Technology/Technician (Definition to be developed – suggestions welcome)

15.1203 Computer Software Technology/Technician (Definition to be developed – suggestions welcome)

15.1299 Computer Engineering Technologies/Technicians, Other . Any instructional program in computer engineering technologies not described above.

15.13 Drafting/Design Engineering Technologies/Technicians. (Definition to be developed – suggestions welcome)

15.1301 Drafting/Design Engineering Technology/Technician, General (Definition to be developed – suggestions welcome)

15.1302 CAD/CAM Design Application Technology/Technician (Definition to be developed – suggestions welcome)

15.1399 Drafting/Design Engineering Technologies/Technicians, Other. Any instructional program in drafting/design engineering technologies not described above.

15.14 Nuclear Engineering Technologies/Technicians (Definition to be developed – suggestions welcome)

15.1401 Nuclear Engineering Technology/Technician (Definition to be developed – suggestions welcome)

15.99 **Engineering~~-Related~~ Technologies/*Technicians*, Other**. (See 15.9999)

15.9999 **Engineering~~-Related~~ Technologies/Technicians, Other.** Any instructional program in engineering technologies not described above.

16. **FOREIGN LANGUAGES AND LITERATURES**. A summary of groups of instructional programs that describe the study of languages other than English and the study of related aspects of foreign literatures and cultures.

------ **AREA, ETHNIC AND CULTURAL STUDIES**. (Refer to 05. Series)

------ **ENGLISH LANGUAGE AND LITERATURE/LETTERS.** (Refer to 23. Series)

16.01 **Foreign Languages and Literatures.** (See 16.0101).

16.0101 **Foreign Languages and Literatures, General.** An instructional program that describes an undifferentiated program in foreign languages and literatures.

------ **Foreign Languages Teacher Education.** (Refer to 13.1306)

------ **Comparative Literature.** (Refer to 23.0301)

16.0102 **Linguistics**. An instructional program that describes the scientific and scholarly study of language and the relationships among languages. Includes instruction in psycholinguistics, anthropological linguistics, historical linguistics, mathematical linguistics, grammatical theory, philosophy of language, philology, sociolinguistics, language and culture studies, and the study of written scripts and their evolution.

16.0103 **Foreign Language Interpretation and Translation.** An instructional program that prepares individuals to translate written documents, or to consecutively or simultaneously interpret oral communications. Includes instruction in translating and/or interpreting from a specific foreign language into English, from English into another specific language, or between two foreign languages.

16.03 **East, *South* and Southeast Asian Languages and Literatures**. A group of instructional programs that describe the study of the languages, literatures, and cultures of East and Southeast Asian peoples.

16.0301 **Chinese Language and Literature.** An instructional program that describes the study of the language, literature, and culture of Chinese-speaking peoples, including dialects such as Cantonese, Taiwanese, and Mandarin.

16.0302 **Japanese Language and Literature.** An instructional program that describes the study of the language, literature, and culture of Japanese-speaking peoples.

16.0399 **East, *South* and Southeast Asian Languages and Literatures, Other.** Any instructional program in East and Southeast Asian languages and literatures not described above, such as Korean, Tibetan, Mongolian, Tagalog, Thai, Lao, Vietnamese, Cambodian, Indonesian/Malay, Burmese, historical and modern languages of the Indian Subcontinent, or others.

16.04 **Slavic and East European Languages and Literatures.** A group of instructional programs that describe the study of the languages, literatures, and cultures of the Slavic, Baltic, and other peoples of Middle and Eastern Europe, excepting the Germanic-speaking peoples.

------ **Germanic Languages and Literatures.** (Refer to 16.05 Series)

------ **European Area Studies.** (Refer to 05.0106)

------ **Russian and Slavic Area Studies.** (Refer to 05.0110)

16.0402 **Russian Language and Literature.** An instructional program that describes the study of the language, literature, and culture of the Russian-speaking peoples.

16.0403 **Slavic Languages and Literatures *(Other than Russian)*.** An instructional program that describes the study of one or more of the languages, literatures and cultures of the non-Russian Slavic peoples, including such languages as Belarussian, Bulgarian, Czech, Polish, Serbo-Croatian, Slovak, Slovenian, Ukrainian, and Old Slavonic.

16.0499 **Slavic and East European Languages and Literatures, Other.** Any instructional program describing the study of non-Slavic Middle and Eastern European languages and literatures excepting the Germanic languages, such as Finnish, Hungarian, Estonian, Latvian, Lithuanian, Old Prussian, and others.

16.05 **Germanic Languages and Literatures.** A group of instructional programs that describe the study of the languages, literatures, and cultures of peoples speaking Germanic languages other than English.

------ **European Area Studies.** (Refer to 05.0106)

16.0501 **German Language and Literature.** An instructional program that describes the study of the language, literature, and culture of the German-speaking peoples, including related dialects such as Low German, Swiss-German, and Old or Middle German.

------ **German Language Teacher Education.** (Refer to 13.1326)

16.0502 **Scandinavian Languages and Literatures.** An instructional program that describes the study of the languages, literatures, and cultures of the Scandinavian peoples, including Danish, Icelandic, Norwegian, Swedish, and Old Norse.

16.0599 **Germanic Languages and Literatures, Other.** Any instructional program in Germanic languages and literatures not described above, such as Yiddish, Dutch, Flemish, Frisian, Gothic and Saxon.

~~16.06 **[Greek Language and Literature (Modern).]** A group of instructional programs that describe the study of the language, literature, and culture of Greek-speaking peoples~~. (Deleted, included under 16.99)

~~16.0602**[Greek Language and Literature (Modern)]**. An instructional program that describes the study of the language, literature, and culture of modern Greece, generally comprises the period from the fall of Byzantium in 1453 to the present.~~ (Deleted, included under 16.9999)

~~16.07 **[South Asian Languages and Literatures.]** A group of instructional programs (See 16.0703).~~ (Deleted, included under 16.03)

~~16.0703**[South Asian Languages and Literatures.]** An instructional program that describes the study of the languages, literatures and cultures of peoples of South Asia, including such languages as Hindi, Urdu, Bengali, Punjabi, and the Dravidian group, and ancestral languages such as Sanskrit, Pali and Bactrian.~~ —(Deleted, included under 16.0399)

16.09 **Romance Languages and Literatures.** A group of instructional programs that describe the languages, literatures, and cultures of peoples speaking languages descended from Latin dialects and their derivatives.

16.0901 **French Language and Literature.** An instructional program that describes the study of the language, literature, and culture of French-speaking peoples, including related languages and dialects such as Creole, Provencal and Walloon.

------ **French Language Teacher Education.** (Refer to 13.1325)

16.0902 **Italian Language and Literature.** An instructional program that describes the study of the language, literature, and culture of Italian-speaking peoples, including dialects and related languages such as Sicilian, Friulian and Sardinian.

------ **Latin.** (Refer to 16.1203)

16.0904 **Portuguese Language and Literature.** An instructional program that describes the study of the language, literature, and culture of Portuguese-speaking peoples, including the Luso-Brazilian and African dialects.

16.0905 **Spanish Language and Literature.** An instructional program that describes the study of the language, literature, and culture of Spanish-speaking peoples, including related or derived dialects and languages such as Catalan, Castillan, and various Latin American dialects.

------ **Spanish Language Teacher Education.** (Refer to 13.1330)

16.0999 **Romance Languages and Literatures, Other.** Any instructional program in Romance languages not described above, such as Romanian and Rhaeto-Romansch.

16.10 Native American/American Indian Languages and Literatures. A group of instructional programs that describe the study of the languages, literatures, and cultures of the original inhabitants of the Western Hemisphere and their descendants. (Restored)

16.1001 Native American/American Indian Languages and Literatures. An instructional program describing the study of one or more of the languages, literatures, and cultures of the original inhabitants of the Western Hemisphere and their descendants, including Aleut, Algonkian, Aymara, Cherokee, Choctaw, Cree, Hawaiian, Hopi, Inuit, Lakhota, Maya, Nahuatl, Navajo, Quechua, and others. (Restored)

16.11 **Middle Eastern Languages and Literatures.** A group of instructional programs that describes the languages, literatures, and cultures of the Semitic and non-Semitic speaking peoples of the Middle East, including Turkey, the Arabian Peninsula, Iran, the Fertile Crescent, and North Africa.

------ **Middle Eastern Studies.** (Refer to 05.0108)

16.1101 **Arabic Language and Literature.** An instructional program that describes the study of the language, literature, and culture of Arabic-speaking peoples, including Classical, Modern Standard, and related dialects and derivatives

------ **Islamic Studies.** (Refer to 05.0204)

16.1102 **Hebrew Language and Literature.** An instructional program that describes the study of the language, literature, and culture of Hebrew-speaking peoples, including promodern and modern Hebrew dialects and derivatives.

------ **Jewish/Judaic Studies.** (Refer to 05.0205)

------ **Germanic Languages and Literatures, Other.** (Including Yiddish) (Refer to 16.0599)

------ **Classical and Ancient Near Eastern Languages and Literatures.** (Refer to 16.12 Series)

------ **Biblical and Other Theological Languages and Literatures.** (Refer to 39.0101)

16.1199 **Middle Eastern Languages and Literatures, Other.** Any instructional program in living Middle Eastern languages and literatures not described above, including such languages as Farsi (Iranian), Turkish (including related dialects and Turkic languages), Berber, and Armenian.

16.12 **Classical and Ancient Near Eastern Languages and Literatures.** A group of instructional programs that describe the study of the languages, literatures and cultures of the Greek- and Latin-speaking peoples of the ancient and Medieval West, and of the peoples of the Pre-Islamic Near East and the Mediterranean Littoral.

16.1201 **Classics and Classical Languages and Literatures.** An instructional program that describes the study of the languages, literatures and general civilization of the classical Greco-Roman world, including both ancient Greek and Latin, and related studies.

------ **Archaeology.** (Refer to 45.0301)

16.1202 **Greek Language and Literature (Ancient and Medieval).** An instructional program that describes the study of the language, literature and culture of the ancient and Medieval Greeks, including Archaic Greece, Classical Greece, the Hellenistic World, and Byzantium.

16.1203 **Latin Language and Literature (Ancient and Medieval).** An instructional program that describes the study of the language, literature and culture of the ancient and Medieval Latin-speaking peoples, including Classical Roman Latin, related ancient Italic dialects and languages, Medieval Latin and derivatives, and related studies.

------ **Medieval and Renaissance Studies.** (Refer to 30.1301)

------ **Biblical and Other Theological Languages and Literatures.** (Refer to 39.0101)

16.1299 **Classical and Ancient Near Eastern Languages and Literatures, Other.** Any instructional program in Classical and ancient Near Eastern languages and literatures not described above, such as Ancient Egyptian, Coptic, Avestan (Old Persian), Akkadian, Aramaic, Ugaritic, Syriac, Phoenician, Hittite and Hurrian, Sumerian, Luwian, Yemeni, Elamite, Cretan, Urartian, and others.

16.13 Celtic Languages and Literatures. A group of instructional programs describing the study of the languages, literatures, and cultures of the Celtic-speaking peoples.

16.1301 Celtic Languages and Literatures. An instructional program that describes the study of the languages, literatures, and cultures of the Celtic-speaking peoples, past and present, including Breton, Irish Gaelic, Scots Gaelic, Manx, Welsh, and others.

16.99 **Foreign Languages and Literatures, Other.** (See 16.9999)

16.9999 **Foreign Languages and Literatures, Other.** Any instructional program in foreign languages and literatures not described above, including language groups and individual languages such as the non-Semitic African languages, Native American languages, Pacific language groups, the Ural-Altaic languages, Basque, and others.

17. **[~~ALLIED HEALTH.~~]** (Moved to 51.Series **HEALTH SCIENCES AND ALLIED HEALTH SERVICES**)

18. **[~~HEALTH SCIENCES.~~]** (Moved to 51. Series **HEALTH SCIENCES AND ALLIED HEALTH SERVICES**)

19. ***COLLEGIATE FAMILY AND CONSUMER SCIENCES*/HOME ECONOMICS.** A summary of groups of instructional programs that describe the relationship of the physical, social, emotional, and intellectual environments to the development of individuals, homes and families, and the effects of these factors on society and the workplace.

19.01 ***Collegiate Family and Consumer Sciences*/Home Economics, General.** (See 19.0101)

19.0101 ***Collegiate Family and Consumer Sciences*/Home Economics, General.** An instructional program that generally describes the study of the relationship between the physical, social, emotional, and intellectual environment and the health and wellness of individuals and families.

------ ***Family and Consumer Science*/Home Economics Teacher Education.** (Refer to 13.1308)

~~19.02 [***Family and Consumer Sciences Business Services*/ Home Economics Business Services**]. A group of instructional programs (See 19.0201)~~ (Deleted)

~~19.0201 [***Business Family and Consumer Sciences*/Business Home Economics**]. An instructional program that describes the relationship between the economic environment and the home and family, including instruction in consumption theory and practices, production and distribution of goods and services, and resource uses as these pertain to family resource management and the consumer in the economic system.~~ (Deleted, included under 19.9999)

~~19.0202 [***Family and Consumer Sciences Communications*/Home Economics Communications.**] An instructional program that describes the communication of home economics subject matter and information to a variety of audiences through print and/or non-print media. Includes instruction in the management of home economics-related communications services and materials.~~ (Deleted, included under 19.9999)

19.03 **Career, Community and Family Studies/~~Family and Community Studies~~.** (See 19.0301).

19.0301 ***Career, Community and Family Studies*/~~Family and Community Studies~~.** An instructional program that describes the study of the cultural, social, and technological influences on families in changing societies, including family programs and support services.

19.04 ***Consumer and Family Resources***/~~**Family Consumer Resource**~~ **Management.** A group of instructional programs that describes the concepts, skills and processes through which decisions about the use and management of resources are made at the individual and family levels.

19.0401 **Family Resource Management Studies.** An instructional program that describes the study of the processes used by families and households in balancing needs and wants and in maximizing the use of available resources. Includes instruction in human behavior, management theory, household planning, financial instruments and planning, and family resource consultative services.

19.0402 **Consumer Economics and Science.** An instructional program that describes the systematic study of the concepts and skills pertaining to consumer behavior in relation to the social, political and economic components of market environments; and strategies and methods for responding to identified problems. Includes instruction in consumer activities and behavior that affect the individual, the family, society and the workplace.

19.0499 ***Consumer and Family Resources***/**Family/**~~**Consumer Resource**~~ **Management, Other.** An instructional program in family/consumer resource management not described above.

19.05 **Foods, *Dietetics* and Nutrition Studies.** (See 19.0501)

19.0501 **Foods, *Dietetics* and Nutrition Studies, General.** An instructional program that generally describes the study of the role of food and nutrition in individual and family health and wellness, and in the study of food production, preparation and service operations. Includes instruction in food product consumption, nutritional care and education, and the organization and administration of food systems.

19.0502 **Foods and Nutrition Science.** An instructional program that describes the scientific study of the chemical, physical and sensory properties of human food; food preservation and safety; nutritional quality; food processing and preparation; food use and diet applications; and food-related logistics management and marketing.

------ **Food Science.** (Refer to 02.0301)

19.0503 **Dietetics/Human Nutritional Services.** An instructional program that describes the provision of nutritional services, menu planning and diet consultation for individuals, families and institutions. Includes instruction in planning and directing food service activities, diet and nutrition analysis and plan formulation, food preparation management, client education and related services.

------ **Dietetic Assistant.** (Refer to 20.0404)

------ **Medical Dietician.** (Refer to 51.2702)

19.0505 **Food Systems Administration.** An instructional program that describes the principles and practices relating to the administration of institutional food service systems. Includes instruction in service design and organization, resource acquisition and management, personnel resources management and human behavior, and consumer economics.

------ **Institutional Food Services Administration.** (Refer to 20.0409)

19.0599 **Foods, *Dietetics* and Nutrition Studies ,Other.** Any instructional program in foods and nutrition studies not described above.

19.06 ***Housing, Interiors and Furnishings Studies*/~~Housing Studies~~.** (See 19.0601)

19.0601 ***Housing, Interiors and Furnishing Studies*/~~Housing Studies~~, General.** An instructional program that generally describes the study of the behavioral, social, economic, functional and aesthetic aspects of housing and other environments. Includes instruction in planning, designing, furnishing, and equipping households, and the behavioral, developmental, public policy, and cultural issues related to households.

19.0602 **Interior Environments**. An instructional program that describes the planning and analysis of interior home environments relative to function and quality as related to individual, family and social development and behavior. Includes instruction in the design of environments and interiors, space utilization, furnishing and equipment from the standpoint of enhancing habitability and the quality of life and work.

------ **Interior Design**. (Refer to 50.0408)

19.0699 ***Housing, Interiors and Furnishing Studies*/~~Housing Studies~~, Other**. Any instructional program in housing studies not described above.

19.07 ***Family and Human Development Studies*/~~Individual and Family Development~~ Studies**. (See 19.0704-19.0799)

~~19.0701 [*Family and Human Development Studies*/**Individual and Family Development Studies, General.**] An instructional program that generally describes the study of the developmental and behavioral characteristics of the individual, within the context of the family, across the life span.~~ (Moved to 42.0701)

~~19.0703 [**Family and Marriage Counseling.**] An instructional program that describes the study of the factors affecting marital relationships, parent-child relationships, and the functioning of the family as a whole; the study of separation, divorce and remarriage, death, exceptional children, and health and wellness; and the application of therapeutic intervention strategies in appropriate situations~~. (Moved to 42.1901)

19.0704 **Family Life and Relations Studies.** An instructional program that describes the study of the family unit as it evolves across the lives of its members, with emphasis on identifying and analyzing family structures, family member roles and functions, family interactions, and family conflicts.

19.0705 **Gerontological Services.** An instructional program that describes the study of the characteristics, attitudes, behavior and needs of older people in family settings, and the methods of organizing services for them. Includes instruction in providing dependent care; serving the physical, social, economic, and psychological needs and concerns of the elderly; related legislation; and community resources.

------ **Gerontology.** (Refer to 30.1101)

19.0706 **Child Growth, Care and Development Studies.** An instructional program that describes the study of the intellectual, social, emotional and physical growth of children from birth through adolescence, and the administration and supervision of services to children and their families. Includes instruction in providing dependent care; related social, behavioral and biological sciences; and management theory and practice.

------ **Developmental and Child Psychology.** (Refer to 42.0701)

19.0799 ***Family and Human Development Studies*/Individual and Family Development Studies, Other** . Any instructional program in individual and family development studies not described above.

19.09 ***Textiles and Apparel Studies*/~~Clothing/Apparel and Textile Studies~~.** (See 19.0901)

19.0901 ***Textiles and Apparel Studies*/-~~Clothing/Apparel and Textile Studies~~.** An instructional program that describes the study of contemporary and historical ways of meeting psychological, sociological, economic, and physiological needs relative to clothing and textile products, including techniques of design, production, distribution, marketing and consumption.

------ **Fashion Design and Illustration.** (Moved to 50.0407)

------ **Fashion Merchandising.** (Refer to 08.0102)

------ **Textile Sciences and Engineering.** (Refer to 14.2801)

19.99 ***Family and Consumer Sciences*/Home Economics, Other.** (See 19.9999)

19.9999 ***Family and Consumer Sciences*/Home Economics, Other.** Any instructional program in home economics not described above.

20. ***VOCATIONAL FAMILY AND CONSUMER SCIENCES*/VOCATIONAL HOME ECONOMICS.** A summary of groups of instructional programs that describe competencies in home economics which prepare individuals for the occupation of homemaking, for paid employment, and for organizing and managing business undertakings and services. (Refer to 19. Series for Collegiate level Family and Consumer Sciences Programs)

----- ***Family and Consumer Sciences*/Consumer and Homemaking Education**. (Moved to CHAPTER II)

20.02 **ChildCare Services /~~ChildCare and Guidance~~ Workers and Managers.** (See 20.0201)

20.0201 **ChildCare Services /~~ChildCare and Guidance~~ Workers and Managers, General.** An instructional program that generally prepares individuals for occupations in childcare and guidance in institutional and residential family settings, often under the supervision of professional personnel. Includes instruction in child growth and development; nutrition; recreation, play and learning activities planning and supervision; child abuse and neglect prevention; parent-child relationships; and applicable legal and administrative requirements.

20.0202 **ChildCare Provider/Assistant.** An instructional program that prepares individuals to be primary providers of home, family-, residential- or institutionally- based childcare services. Includes instruction in planning, organizing and conducting meaningful play and learning activities; child monitoring and supervision; record keeping; and referral procedures.

20.0203 **ChildCare Services Manager.** An instructional program that prepares individuals to develop and manage effective childcare programs and facilities. Includes instruction in the management of financial operations; selecting and developing facilities; selecting staff and staffing patterns; providing for staff development opportunities; developing a total program for children; and working with parents, community organizations and others concerned with children.

20.0299 **ChildCare Services /~~ChildCare and Guidance~~ Workers and Managers, Other.** Any instructional program in child care and guidance management and services not described above.

20.03 ***Textiles and Apparel/*~~**Clothing, Apparel and Textile**~~ **Workers and Managers** (See 20.0301)

20.0301 ***Textiles and Apparel/*~~**Clothing, Apparel and Textile**~~ **Workers and Managers, General**. An instructional program that generally prepares individuals for occupations concerned with the entire spectrum of clothing, apparel, and textiles management, production, and services, including but not limited to construction; fabric and fabric care; pattern design; principles in clothing construction and selection; fitting and alterations of ready-to-wear garments; custom tailoring; clothing maintenance; and textiles testing.

20.0303 **Commercial Garment and Apparel Worker.** An instructional program that prepares individuals to construct ready-to-wear garments and apparel. Includes instruction in developing and preparing patterns for standardized sizes; selecting appropriate fabric; cutting of fabric with commercial cutting equipment; stitching fabric on commercial power sewing equipment; applying finishes and notions to garments and apparel; and pressing and packing garments or apparel.

20.0305 **Custom Tailor.** An instructional program that prepares individuals to design, construct, alter, and repair men's, women's and children's garments and apparel. Includes instruction in tailoring design, fabric selection, customizing to customer specifications; taking measurements and fitting; preparing patterns; cutting, sewing, altering, refitting and adjusting; operation of hand and power equipment; and pressing and smoothing seams.

20.0306 **Fashion and Fabric Consultant.** An instructional program that prepares individuals to assist in apparel and fashion selection, style coordination, customer sales and consulting, fabric selection, clothing specifications, and contract buying activities. Includes instruction in supplying regular clothing needs or acting as a consultant for special events such as weddings.

~~20.0309 **[Drycleaner and Launderer.]** An instructional program that prepares individuals to perform clothing and apparel cleaning services and to operate and manage laundry and dry-cleaning facilities. Includes instruction in routine clothing repairs, fabric identification, spot removing and special cleaning, dyeing and bleaching, ironing and pressing, equipment operation and maintenance, and business management~~. (Deleted, included under 20.0399)

20.0399 ***Textiles and Apparel/*~~**Clothing, Apparel and Textile**~~ **Workers and Managers, Other.** Any instructional program in clothing, apparel, and textile management, production, and services not described above.

20.04 ***Food Production and Services/*~~**Institutional Food**~~ **Workers and Administrators.** (See 20.0401)

------ **Culinary Arts and Related Services.** (Refer to 12.05 Series)

20.0401 ***Food Production and Services/*~~**Institutional Food**~~ **Workers and Administrators.** An instructional program that generally prepares individuals in managerial, production, and service skills used in governmental, commercial, or independently owned institutional food establishments and related food industry occupations. Includes instruction in planning, selecting, storing, purchasing, preparing, and serving food and food products; basic nutrition, sanitation, and food safety; the use and care of commercial equipment; serving techniques; and the operation of institutional food establishments.

------ **Food and Beverage/Restaurant Operations Manager**. (Refer to 12.0504)

------ **Kitchen Personnel/Cook and Assistant Training**. (Refer to 12.0505)

------ **Baker/Pastry Chef**. (Moved to 12.0501)

------ **Culinary Arts/Chef Training**. (Moved to 12.0503)

20.0404 **Dietician Assistant.** An instructional program that prepares individuals to assist registered dieticians in planning, preparing and serving meals to individuals with specific dietary needs. Includes instruction in equipment use, food preparation, diet regulations, food handling, safety and sanitary standards and administrative techniques and procedures.

20.0405 **Food Catering.** An instructional program that prepares individuals to book, plan and manage the preparation food and services for special occasions. Includes instruction in arranging for equipment, decorations, entertainment, and transportation of food and equipment to the site of the event.

20.0409 **Institutional Food Services Administrator.** An instructional program that prepares individuals to manage and supervise institutional food service operations, including school food services and other government-regulated food service operations. Includes instruction in management, purchasing and storage, food preparation, staff supervision, diet and menu planning, and sanitation and safety.

------ **Food and Beverage/Restaurant Operations Manager.** (Refer to 12.0504)

------ **Food Systems Administration.** (Refer to 19.0505)

20.0499 ***Food Production and Services/*~~**Institutional Food**~~ **Workers and Administrators, Other**. Any instructional program in institutional food preparation, administration and related services not described above.

20.05 **Home Furnishings ~~and Equipment Installers and~~ Consultants**. (See 20.0501)

20.0501 **Home Furnishings ~~and Equipment Installers and~~ Consultants, General**. An instructional program that generally prepares individuals to assist in the entire spectrum of home furnishings and decorations. Includes instruction in selecting, purchasing, designing, and decorating; home furnishings and equipment; floral design; accessory construction; textiles; and upholstery.

~~20.0502 **[Window Treatment Maker and Installer].** An instructional program that prepares individuals to design, construct and/or install custom window treatments in residential and commercial facilities. Includes instruction in selecting textiles, fabrics and finishes; selecting appropriate types of window treatments; and constructing and installing of these treatments.~~ (Deleted)

~~20.0599 **Home Furnishings and Equipment Installers and Consultants, Other.** Any instructional program in home furnishings and equipment management, production and services not described above.~~ (Deleted)

20.06 **Custodial, Housekeeping and Home Services Workers and Managers.** (See 20.0601-20.0699)

20.0601 **Custodial, Housekeeping and Home Services Workers and Managers, General.** An instructional program that generally prepares individuals for occupations relating to commercial housekeeping and cleaning operations; and for providing housekeeping services to paying clients and to homebound individuals.

20.0602 **Elder Care Provider/Companion.** An instructional program that prepares individuals to assist elderly individuals in managing their personal and social needs, and their business affairs; to assist the elderly in the maintenance of independent living arrangements; and to promote the well-being of the elderly.

20.0604 **Custodian/Caretaker.** An instructional program that prepares individuals to clean and care for buildings, including their fixtures, furnishings, floor surfaces, and wall coverings. Includes instruction in equipment operation and maintenance, chemical and non-chemical cleaning operations, sanitation, safety, staff supervision and the management of custodial businesses and services.

20.0605 **Executive Housekeeper.** An instructional program that prepares individuals to provide comprehensive cleaning and housekeeping services for institutions and to supervise and manage such services. Includes instruction in floor maintenance and care; walls, woodwork, and window cleaning; furnishings and equipment maintenance; laundry and linen services; supply ordering and storage; and record-keeping.

20.0606 **Homemaker's Aide.** An instructional program that prepares individuals to assist homemakers in the management and operation of the home, including child and convalescent care, cleaning and maintenance, supplies purchasing and food preparation.

20.0699 **Custodial, Housekeeping and Home Services Workers and Manager, Other.** Any instructional program in institutional, home management and supporting programs not described above.

20.99 ***Vocational Family and Consumer Sciences*/Home Economics, Other**. (See 20.9999)

20.9999 ***Vocational Family and Consumer Sciences*/Home Economics, Other**. Any instructional program in vocational home economics not described above.

21. [~~TECHNOLOGY EDUCATION/INDUSTRIAL ARTS.~~] (Moved to **CHAPTER III**)

22. **LAW AND LEGAL STUDIES** A summary of groups of instructional programs that describe the theory, history and application of the rules of conduct by which societal relations are formally structured and adjudicated.

22.01 **Law and Legal Studies.** A group of instructional programs that describe the theory, history and application of the rules of conduct by which societal relations are formally structured and adjudicated.

22.0101 **Law (LL.B., JD)** An instructional program that prepares individuals for the independent professional practice of law, for taking state and national bar examinations, and for advanced research in jurisprudence. Includes instruction in the theory and practice of the legal system, including the statutory, administrative, and judicial components of civil and criminal law.

22.0102 **Pre-Law Studies**. An instructional program that prepares individuals for admission to a first-professional program in law.

22.0103 **Paralegal/Legal Assistant**. An instructional program that prepares individuals to perform research, drafting, investigatory, record-keeping and related administrative functions under the supervision of an attorney or court. Includes instruction in legal research, drafting legal documents, appraising, pleading, courthouse procedures, and legal specializations.

------ **Legal Administrative Assistant/Secretary.** (Refer to 52.0403)

22.0104 **Juridical Science/Legal Specialization (LL.M., M.C.L., J.S.D., S.J.D.).** An instructional program that prepares attorneys and law school graduates for advanced technical specialization in legal research and practice, including such concentrations as Tax Law, International Law, Comparative Law, Admiralty, Patents and Intellectual Property, Contracts, Trial Practice/Advocacy, and others.

22.0199 **Law and Legal Studies, Other.** Any instructional program in law and legal studies not described above.

23. **ENGLISH LANGUAGE AND LITERATURE/LETTERS.** A summary of groups of instructional programs that describe the structure and use of the English language and dialects, speech, writing, and various aspects of the literatures and cultures of the English-speaking peoples.

------ **FRENCH (CANADIAN) LANGUAGE AND LITERATURE/LETTERS. (Refer to 54. Series)** (NOTE: The codes in Series 54. are for the exclusive use of Statistics Canada in collecting data on Canadian programs in French that correspond to English programs such as are listed under Series 23. for native speakers of the language. French is one of two national languages in Canada.. The use of Series 54. codes in the United States is inappropriate. Programs in the study of French as a foreign language or to learn to teach it in school settings should be reported under Series 13. or 16. as appropriate.)

------ **FOREIGN LANGUAGE AND LITERATURES.** (Refer to 16. Series)

23.01 **English Language and Literature, General.** (See 23.0101).

23.0101 **English Language and Literature, General.** An instructional program that generally describes the English language, including its history, structure and related communications skills; and the literature and culture of English-speaking peoples.

------ **English Teacher Education.** (Refer to 13.1305)

------ **Classics.** (Moved to 16.12 Series)

------ **French Language and Literature.** (Refer to 16.0901)

23.03 **Comparative Literature.** (See 23.0301)

23.0301 **Comparative Literature.** An instructional program that describes the study of the literatures of different societies and linguistic groups in comparative perspective, including analyses of cross-cultural influences, national literary styles, the influence of translation, and the shared international literary heritage. Includes instruction in the study of literatures in the original languages as well as in English translation.

23.04 **English Composition.** (See 23.0401).

23.0401 **English Composition**. An instructional program that describes the principles of English vocabulary, grammar, morphology, syntax and semantics; and techniques of selecting, developing, arranging, combining and expressing ideas in appropriate written forms.

23.05 **English Creative Writing**. (See 23.0501).

23.0501 **English Creative Writing**. An instructional program that describes the process and techniques of original composition in various literary forms such as the short story, poetry, the novel, and others. Includes instruction in technical and editorial skills, criticism, and the marketing of finished manuscripts.

23.07 **American Literature (United States. *and Canadian*.)** A group of instructional programs that describe the study of the literature and literary development, both formal and folkloric, of the English-speaking peoples of the Western Hemisphere.

23.0701 **American Literature (United States).** An instructional program that describes the study of the literature and literary development, both formal and folkloric, of the United States from the Colonial Era to the present. Includes instruction in period and genre studies, author studies, literary criticism, and regional and oral traditions.

23.0702 American Literature (Canadian). An instructional program that describes the study of the literature and literary development, both formal and folkloric, of Canada from its origins to the present. Includes instruction in period and genre studies, author studies, literary criticism, and regional and oral traditions

23.08 **English Literature (British and Commonwealth).** A group of instructional programs that describe the study of the literature and literary development, both formal and folkloric, of England, the British Isles, and the English-speaking peoples of the British Commonwealth.

23.0801 **English Literature (British and Commonwealth).** An instructional program that describes the study of the literatures and literary developments of the English-speaking peoples of the British Isles and the British Commonwealth, from the origins of the English language to the present. Includes instruction in period and genre studies, author studies, country and regional specializations, literary criticism, and the study of folkloric traditions.

23.10 **Speech and Rhetorical Studies.** (See 23.1001).

23.1001 **Speech and Rhetorical Studies.** An instructional program that describes the study of human interpersonal communication from the scientific/behavioral and humanistic perspectives. Includes instruction in the theory and physiology of speech, the history of discourse, the structure and analysis of argument and types of public speech, the social role of speech, oral interpretation of literature, interpersonal interactions, and the relation of speech to nonverbal and other forms of message exchanges.

------ **Speech Teacher Education.** (Refer to 13.1331)

23.11 **English Technical and Business Writing.** (See 23.1101).

23.1101 **English Technical and Business Writing.** An instructional program that describes the theory, methods, and skills needed for writing and editing scientific, technical and business papers and monographs.

------ **Public Relations and Organizational Communications.** (Refer to 09.0501)

23.99 **English Language and Literature/Letters, Other.** (See 23.9999)

23.9999 **English Language and Literature/Letters, Other.** Any instructional program in English language and literature not described above.

24. **LIBERAL ARTS AND SCIENCES, GENERAL STUDIES AND HUMANITIES.** A summary of groups of instructional programs that describe general programs and independent or individualized studies in the liberal arts subjects, the humanities disciplines and the general curriculum.

24.01 **Liberal Arts and Sciences, General Studies and Humanities.** (See 24.0101)

24.0101 **Liberal Arts and Sciences/Liberal Studies.** An instructional program that describes a structured combination of the arts, biological and physical sciences, social sciences, and humanities, emphasizing breadth of study. Includes instruction in independently designed, individualized, or regular programs.

24.0102 **General Studies.** An instructional program that describes undifferentiated study in traditional and/or continuing/distance education formats for adult or traditional postsecondary students, including general arts, general science, or unstructured studies.

24.0103 **Humanities/Humanistic Studies.** An instructional program that describes combined studies and research in the humanities subjects as distinguished from the social and physical sciences, emphasizing languages, literatures, art, music, philosophy and religion.

24.0199 **Liberal Arts and Sciences, General Studies and Humanities, Other.** Any single instructional program in liberal arts and sciences, general studies and humanities not described above.

25. **LIBRARY SCIENCE.** A summary of groups of instructional programs that describe the knowledge and skills required managing and/or maintaining libraries and related information and record systems, collections and facilities for research and general use.

25.01 **Library Science/Librarianship.** (See 25.0101).

25.0101 **Library Science/Librarianship.** An instructional program that describes the knowledge and skills required to develop, organize, store, retrieve, administer, and facilitate the use of collections of information in such formats as books, documents, manuscripts, machine-readable data bases, filmed and recorded materials, and that prepares individuals for professional service as librarians and information consultants.

------ **Public/Applied History and Archival Administration.** (Refer to 45.0805)

25.03 **Library Assistant.** (See 25.0301).

25.0301 **Library Assistant.** An instructional program that prepares individuals to assist professional librarians. Includes instruction in principles, systems, processes, and procedures of library operation; library resources and services; processes of acquisition, cataloging, storage, and display systems; discovery and retrieval of requested materials; management of books, periodicals, and other documents.

------ **Library Science.** (Moved to 25.01)

------ **Museology**. (Moved to 30.14)

25.99 **Library Science, Other.** (See 25.9999)

25.9999 **Library Science, Other.** Any instructional program in library science not described above.

26. **BIOLOGICAL SCIENCES/LIFE SCIENCES.** A summary of groups of instructional programs that describe the scientific study of living organisms and their systems.

26.01 **Biology, General.** (See 26.0101).

26.0101 **Biology, General.** An instructional program that generally describes the scientific study of the structure, function, reproduction, growth, heredity, evolution, behavior and distribution of living organisms, and their relations to their natural environments.

------ **Biology Teacher Education.** (Refer to 13.1322)

26.02 **Biochemistry and Biophysics.** (See 26.0202-26.0203)

26.0202 **Biochemistry.** An instructional program that describes the chemical processes of living organisms. Includes instruction in the chemical mechanisms of genetic information storage and transmission; the chemistry of cell components; blood chemistry; the chemistry of biological systems and biological products; and the chemistry of life processes such as respiration, digestion and reproduction.

------ **Medical Biochemistry.** (Refer to 51.1302)

26.0203 **Biophysics.** An instructional program that describes the application of physics principles to the study of living cells and organisms, including structures and fine structures, bioelectric phenomena, radiation effects, molecular behavior, membranes, organic thermodynamics, and quantitative analysis and modeling.

------ **Bioengineering and Biomedical Engineering.** (Refer to 14.0501)

------ **Medical Biophysics.** (Refer to 51.1304)

26.03 **Botany.** (See 26.0301)

26.0301 **Botany, General.** An instructional program that generally describes the scientific study of plants, related bacteria, fungi, and algae life forms. Includes instruction in the classification, structure, function, reproduction, growth, heredity, evolution, and the pathology of plant life, with particular attention to basic processes such as photosynthesis, plant biochemistry and plant ecosystems.

------ **Plant Sciences, General.** (Refer to 02.0401)

------ **Bacteriology.** (Moved to 26.0502)

26.0304 Plant Genetics. An instructional program that describes the scientific study of biological inheritance and variation in plants, and the mechanisms of gene behavior. Includes instruction in molecular genetics, mutation, gene expression, specification, cloning, the study of inherited diseases and disorders, breeding, genetic biochemistry and biophysics, gene transference, and gene modification. (Restored)

------ **Agricultural Plant Breeding and Genetics.** (Refer to 02.0405)

26.0305 **Plant Pathology.** An instructional program that describes the nature causes development and treatment of plant diseases. Includes instruction in the nature and behavior of disease causal agents, including other life forms and non-biological factors; the study of chemistry and physics of basic pathogens; disease host behaviors; and the development and analysis of disease control and treatment agents.

------ **Agricultural Plant Pathology.** (Refer to 02.0406)

26.0307 **Plant Physiology.** An instructional program that describes the scientific study of plant functions and life processes, including such metabolic processes as photosynthesis, respiration, assimilation, and transpiration; and plant systems, including movement, reproduction, digestion and anatomical system functions.

------ **Agricultural Plant Physiology.** (Refer to 02.0407)

26.0399 **Botany, Other.** Any instructional program in botany not described above.

26.04 **Cell and Molecular Biology.** A group of instructional programs that describe the cell as a unit of organization in plans and animals, and the molecular structure and processes of living organisms.

26.0401 **Cell Biology.** An instructional program that describes the scientific study of the cell as a biological system in plants and animals. Includes instruction in cellular structure and function, biosynthesis, enzyme production, cell communication and nutrition, chromosome organization and function, cell life cycles, and cell pathology.

------ **Medical Cell Biology.** (Refer to 51.1305)

26.0402 **Molecular Biology.** An instructional program that describes the scientific study of the molecular structures and processes that underlay the storage and transmission of genetic information, of energy storage and transfer, of hormone generation, and of basic life process such as development, growth and aging.

------ **Medical Molecular Biology.** (Refer to 51.1309)

26.499 ~~**[Cell and Molecular Biology, Other].** Any instructional program in cell and molecular biology not described above~~. (Deleted)

26.05 **Microbiology/Bacteriology** (See 26.0501-26.0502).

26.0501 Microbiology~~/Bacteriology~~. An instructional program that describes the scientific study of microorganisms at the cellular level. Includes instruction in the ecological behavior of microorganisms, their anatomy and physiology, pathogenesis, and microbe evolution and mutation. **(Bacteriology Moved to 26.0502)**

------ **Medical Microbiology.** (Refer to 51.1308)

26.0502 Bacteriology. An instructional program that describes the scientific study of bacterial microorganisms, as distinguished from the cellular components of larger organisms. Includes instruction in the ecological behavior of microorganisms, their anatomy and physiology, pathogenesis, and microbe evolution and mutation.

26.06 **Miscellaneous Biological Specializations.** A group of instructional programs that describe specialized areas of the biological sciences not pertaining exclusively to botany, zoology, microbiology, cell and molecular biology, or related physical sciences.

26.0601 **Anatomy.** An instructional program that describes the scientific study of the structure and function of living organisms, tissues, organs, and systems. Includes instruction in gross anatomy, histology, ultrastructure, neuroanatomy, microscopy, dissection, electrical and atomic analytical methods, and quantification methods.

------ **Medical Anatomy.** (Refer to 51.1301)

------ **Biometrics and Biostatistics.** (Moved to 26.0614 and 26.0615)

26.0603 **Ecology**. An instructional program that describes the scientific study of ecological systems and the physical interactions among system components. Includes instruction in population biology, large and small ecosystems, environmental factors affecting organisms, evolution and extinction, and symbiotic relationships.

------ **Environmental Science.** (Refer to 03.0102)

26.0604 Developmental Biology/Embryology. An instructional program that describes the scientific study of the formation, development, structural, and functional aspects of embryos before and after metamorphosis, hatching, or generation. (Restored)

26.0607 **Marine/Aquatic Biology.** An instructional program that describes the scientific study of marine organisms and their environments. Includes instruction in freshwater and saltwater organisms, physiological and anatomical marine adaptations, ocean and freshwater ecologies, marine microbiology, marine mammalogy, ichthyology, marine botany, and biochemical products of marine life used by humans.

26.0608 **Neuroscience.** An instructional program that describes the scientific study of the anatomy, physiology, biophysics, biochemistry, molecular biology and behavior roles of neuron cells and biological nervous systems. Includes instruction in neurological signaling, neuroanatomy and brain research, neuropharmacology, and neuropsychological research.

------ **Medical Neurobiology.** (Refer to 51.1310)

26.0609 **Nutritional Sciences.** An instructional program that describes the scientific study of the biological processes by which organisms ingest, digest and use the chemical compounds vital to survival, and which cannot be synthesized by the organism itself. Includes instruction in nutritional biochemistry and biophysics, anatomy and physiology of digestive systems, environmental and behavioral aspects of nutrition, and studies of the nutritional problems of specific organisms.

------ **Agricultural Animal Nutrition.** (Refer to 02.0204)

------ **Food Sciences and Technology.** (Refer to 02.0301)

------ **Medical Nutrition.** (Refer to 51.1311) .

------ **Foods and Nutrition Science.** (Refer to 19.0502)

26.0610 **Parasitology.** An instructional program that describes the scientific study of organisms living on or within biological hosts, their behavioral interactions with host organisms, and defenses against parasitical infestations. Includes instruction in parasitical evolution and community behavior, parasite metabolism, immunization processes, drug development, and drug reactions.

26.0611 **Radiation Biology/Radiobiology.** An instructional program that describes scientific study of the effects of radiation on organisms and biological systems. Includes instruction in particle physics, ionization, and biophysics of radiation perturbations, cellular and organismic repair systems, genetic and pathological effects of radiation, and the measurement of radiation dosages.

26.0612 **Toxicology.** An instructional program that describes the scientific study of the nature, source, effects, identification and characteristics of poisons, toxic substances, and exogenous chemical agents and their effect on biological organisms. Includes instruction in environmental biology, chemico-physiological mechanisms, genetic toxicology, and studies of specific organisms and habitats, and the development of toxic defenses and antidotes.

------ **Medical Toxicology.** (Refer to 51.1314)

26.0613 **Genetics, Plant and Animal.** An instructional program that describes the scientific study of biological inheritance and variation in organisms, and the mechanisms of gene behavior. Includes instruction in molecular genetics, mutation, gene expression, specification, cloning, the inherited diseases and disorders, breeding, genetic biochemistry and biophysics, gene transference, and gene mutation.

26.0614 **Biometrics.** An instructional program that describes quantitative measurement methods in the biological and related sciences; the development of biometrics solutions to specific research problems; and related computer applications. Includes instruction in algebraic analysis, matrix algebra, computer methods, and applications to specific biological sub-disciplines.

------ **Medical Biomathematics and Biometrics.** (Refer to 51.1303)

26.0615 **Biostatistics.** An instructional program that describes the application of statistical methods and techniques to the study of living organisms and biological systems. Includes instruction in experimental design and data analysis, projection methods, descriptive statistics, and specific applications to biological sub-disciplines.

26.0616 **Biotechnology Research.** An instructional program that describes the application of the biological sciences to the development of medical and industrial products and processes, and the methods and equipment used in these procedures. Includes instruction in genetic engineering, cell technology, protein synthesis, applied biology, artificial enzyme production, biomaterial development, and drug therapy mechanisms.

------ **Bioengineering and Biomedical Engineering.** (Refer to 14.0501)

26.0617 **Evolutionary Biology.** An instructional program that describes the scientific study of the generation of organismic traits and of shared traits across taxonomic classifications, and the refinement of related theory and experimental methods. Includes instruction in the process of heredity, genetic mutation and variation, phenotype determination, ecological determinants of species survival and adaptation, population genetics, taxonomic classification, developmental biology, and paleontology.

26.0618 **Biological Immunology.** An instructional program that describes the scientific study of organismic responses to, and defenses against, invasive foreign substances and parasitical life forms. Includes instruction in the anatomy and physiology of immune systems, autoimmune responses, disease response mechanisms and triggers, antigen receptors, membrane transfer, the histocompatibility complex, immunogenetics, immunochemistry, and immune system regulation.

------ **Medical Immunology.** (Refer to 51.1307)

26.0619 **Virology** An instructional program that describes the scientific study of viruses, a group of parasitical subcellular biologic entities. Includes instruction in viral classification, genetic effects of viral infestations, viral genome and phonemes, viruses as cancer agents, viral applications in genetic research and engineering, and the development of antiviral drugs and other therapies.

26.0699 **Miscellaneous Biological Specializations, Other.** Any instructional program in miscellaneous biological specializations, not described above.

26.07 **Zoology.** A group of instructional programs that describe the scientific study of animals, including their structure, reproduction, growth, heredity, evolution, behavior, and distribution.

26.0701 **Zoology, General.** An instructional program that generally describes the scientific study of animals, including their structure, reproduction, growth, heredity, evolution, behavior, and distribution.

------ **Animal Sciences.** (Refer to 02.02 Series)

26.0702 **Entomology.** An instructional program that describes the scientific study of insects, including life cycle, morphology, physiology, ecology, taxonomy, population dynamics, genetics, and ecosystem relations. Includes instruction in the biological and chemical control of insects, and the development of insecticide agents.

------ **Plant Protection (Pest Management).** (Refer to 02.0408)

26.0703 ***Genetics, Human and Animal. An instructional program that describes the scientific study of biological inheritance and variation in humans and animal organisms, and the mechanisms of gene behavior. Includes instruction in molecular genetics, mutation, gene expression, specification, cloning, the study of inherited diseases and disorders, breeding, genetic biochemistry and biophysics, gene transference, and gene modification. (Restored)***

------ **Agricultural Animal Breeding and Genetics.** (Refer to 02.0202)

------ **Medical Genetics**. (Refer to 51.1306)

26.0704 **Pathology, Human and Animal**. An instructional program that describes the scientific study of the nature, causes, and development of human and animal diseases, and the mechanisms of disease infestation and transfer. Includes instruction in human and animal pathobiology, disease morphology, disease biochemistry, physiology of disease and cell injury, and immunopathology.

------ **Medical Pathology**. (Refer to 51.1312)

26.0705 **Pharmacology, Human and Animal**. An instructional program that describes the scientific study of the therapeutic and toxic effects of drugs on living tissues and entire organisms. Includes instruction in pharmacodynamic behavior, drug metabolism, chemical pharmacology, the physiological effects of chemical substances on human beings and animals, therapeutic applications, chemical profile analysis, and rational drug design.

------ **Medical Pharmacology and Pharmaceutics**. (Refer to 51.2003)

26.0706 **Physiology, Human and Animal.** An instructional program that describes the scientific study of organismic and systemic function and behavior in humans and animals, including processes such as respiration, circulation, digestion, excretion, and reproduction.

------ **Agricultural Animal Physiology**. (Refer to 02.0205)

------ **Medical Physiology**. (Refer to 51.1313)

26.0799 **Zoology, Other**. Any instructional program in zoology not described above.

26.99 **Biological Sciences/Life Sciences, Other.** (See 26.9999)

26.9999 **Biological Sciences/Life Sciences, Other.** Any instructional program in biological sciences not described above.

27. **MATHEMATICS.** A summary of groups of instructional programs that describe the systematic study of logical symbolic language and its applications.

27.01 **Mathematics, General**. (See 27.0101)

27.0101 **Mathematics, General**. An instructional program that describes the rigorous analysis of quantities, magnitudes, forms, and their relationships, using symbolic logic and language. Includes instruction in algebra, calculus, functional analysis, geometry, number theory, logic, topology and other mathematical specializations.

------ **Mathematics Teacher Education.** (Refer to 13.1311)

------ **Philosophy**. (Refer to 38.0101)

27.0102 Algebra. An instructional program that describes the study of the expression of quantities and their relationships by means of symbols, vectors, matrices, and equations.

27.0103 Analysis and Functional Analysis. An instructional program that describes the study of problem investigation and proof based on number theory, algebra, differential and integral calculus, and the theory of limits.

27.0104 Geometry. An instructional program that describes the study of properties, measurement, and relationships pertaining to points, lines, angles, surfaces, and solids.

27.0105 Logic. An instructional program that describes the study of the canons and criteria of validity, definition, classification, formal and symbolic reasoning, and deduction and inference.

------ **Philosophy.** (Refer to 38.01 Series)

27.0106 Number Theory. An instructional program that describes the study of the properties of integers.

27.0107 Topology. An instructional program that describes the study of the properties of unaltered geometric configurations under conditions of continuous, multi-directional transformations.

27.03 **Applied Mathematics.** (See 27.0301)

------ **Engineering, General.** (Refer to 14.0101)

------ **Physical Sciences, General.** (Refer to 40.0101)

------ **Business Quantitative Methods and Management Science.** (Refer to 52.13 Series)

27.0301 **Applied Mathematics, General.** An instructional program that describes the application of mathematical principles to the solution of functional area problems, using the knowledge base of the subject or field for which the analytical procedures are being developed. Includes instruction in computer-assisted mathematical analysis and the development of tailored algorithms for solving specific research problems.

------ **Computer Science.** (Refer to 11.0701)

------ **Educational Assessment, Testing and Measurement.** (Refer to 13.0604)

------ **Biometrics.** (Refer to 26.0614)

------ **Mathematics and Computer Science.** (Refer to 30.0801)

------ **Econometrics and Quantitative Economics.** (Refer to 45.0603)

------ **Medical Biomathematics and Biometrics.** (Refer to 51.1303)

------ **Accounting, General.** (Refer to 52.0301)

------ **Actuarial Science.** (Refer to 52.0802)

27.0302 **Operations Research.** An instructional program that describes the development and application of complex mathematical or simulation models to solve problems involving operational systems, where the system concerned is subject to human intervention. Includes instruction in advanced multivariate analysis, application of judgement and statistical tests, optimization theory and techniques, resource allocation theory, mathematical modeling, control theory, statistical analysis, and applications to specific research problems.

27.0303 Computing Theory. (Definition to be developed – suggestions welcome)

27.0399 **Applied Mathematics, Other.** Any instructional programs in applied mathematics not described above.

27.05 **Mathematical Statistics.** (See 27.0501)

27.0501 **Mathematical Statistics.** An instructional program that describes the mathematical theory and proofs forming the basis of probability and inference, and their applications to the collection, analysis and description of data. Includes instruction in statistical theory, experimental analysis, sampling techniques, survey research, projections, and related evaluations of numerical data.

------ **Educational Statistics and Research Methods.** (Refer to 13.0603)

------ **Biostatistics.** (Refer to 26.0615)

------ **Demography/Population Studies.** (Refer to 45.0501)

------ **Health and Medical Biostatistics.** (Refer to 51.2204)

------ **Business Statistics.** (Refer to 52.1302)

------ **Marketing Research.** (Refer to 52.1402)

27.99 **Mathematics, Other.** (See 27.9999)

27.9999 **Mathematics, Other.** Any instructional program in mathematics not described above.

28. **[~~MILITARY SCIENCES~~.]** (Moved to **CHAPTER IV: UNITED STATES RESERVE OFFICER TRAINING CORPS PROGRAMS**)

------ **Maritime Science (Merchant Marine)** (Moved to 49.0309)

29. **MILITARY TECHNOLOGIES.** A summary of groups of instructional programs that prepare individuals in specialized and advanced subject matter for the armed services and related national security organizations.

29.01 **Military Technologies.** (See 29.0101)

29.0101 **Military Technologies.** An instructional program that prepares individuals to undertake advanced and specialized leadership and technical responsibilities for the armed services and related national security organizations. Includes instruction in such areas as weapons systems and technology, communications, intelligence, management, logistics, and strategy.

30. **MULTI/INTERDISCIPLINARY STUDIES.** A summary of groups of instructional programs, the components of which derive from two or more separate instructional programs, but that are considered to be a single degree program.

------ **AREA, ETHNIC AND CULTURAL STUDIES.** (Refer to 05. Series Instructional programs in the 05. Series are often confused with the 30 Series program since these programs describe the history, society, politics, culture, and economics of a particular geographic region, or a subset of the population sharing common characteristics, traits and customs, all 05. Series programs are multi/interdisciplinary studies)

30.01 **Biological and Physical Sciences.** (See 30.0101).

30.0101 **Biological and Physical Sciences.** An instructional program that describes either a general synthesis of one or more of the biological and physical sciences, or a specialization which draws from the biological and physical sciences.

30.05 **Peace and Conflict Studies.** (See 30.0501)

------ **Psychology.** (Refer to 42. Series)

------ **Social Sciences and History.** (Refer to 45. Series)

30.0501 **Peace and Conflict Studies.** An instructional program that describes the study of the origins, resolution and prevention of international and inter-group conflicts. Includes instruction in peace research methods and related social scientific and psychological knowledge bases.

------ **International Relations and Affairs.** (Refer to 45.0901)

30.06 **Systems Science and Theory.** (See 30.0601).

30.0601 **Systems Science and Theory.** An instructional program that describes a multidisciplinary approach to the analysis and solution of complex problems, requiring a combined approach using data and models from the natural, social, technological, behavioral and life sciences, and other specialized fields.

------ **Systems Engineering.** (Refer to 14.2701)

30.08 **Mathematics and Computer Science.** (See 30.0801)

30.0801 **Mathematics and Computer Science.** An instructional program that describes a general synthesis of mathematics and computer science or a specialization which draws from mathematics and computer science.

30.10 **Biopsychology.** (See 30.1001)

------ **Biological Sciences/Life Sciences.** (Refer to 26. Series)

30.1001 **Biopsychology.** An instructional program that describes the study of the biological linkages to psychological phenomena, especially the linkages between biochemical and biophysical activity and the functioning of the central nervous system.

------ **Physiological Psychology/Psychobiology.** (Refer to 42.1101)

30.11 **Gerontology.** (See 30.1101)

30.1101 **Gerontology.** An instructional program that describes the study of the human aging process and aged human populations, using the knowledge and methodologies of the social sciences, psychology and the biological and health sciences.

------ **Gerontological Services.** (Refer to 19.0705)

------ **Social Work.** (Refer to 44.0701)

30.12 **Historic Preservation, Conservation and Architectural History.** (See 30.1201).

30.1201 **Historic Preservation, Conservation and Architectural History.** An instructional program that describes the architectural design principles and building techniques used in historic structures and environments, and the process of saving and restoring old buildings and districts for contemporary use and enjoyment. Includes instruction in architectural history; building conservation techniques; real estate, land-use and tax laws and codes; economics and public policy; and public relations.

30.13 **Medieval and Renaissance Studies.** (See 30.1301)

30.1301 **Medieval and Renaissance Studies.** An instructional program that describes the study of the Medieval and Renaissance periods in European and circum-Mediterranean history from the perspective of various disciplines in the humanities and social sciences, including history and archeology, as well as studies of period art and music.

30.14 **Museology/Museum Studies.** (See 30.1401)

30.1401 **Museology/Museum Studies.** An instructional program that describes the attitudes, knowledge, and skills required to develop, prepare, organize, administer, conserve, store and retrieve artifacts, exhibits and entire collections in museums and galleries, and that prepares individuals to assume curatorial, technical and managerial positions in museums. Includes instruction in institutional management, acquisition, exhibit design, conservation, packing techniques, and public relations.

30.15 **Science, Technology and Society.** (See 30.1501)

30.1501 **Science, Technology and Society.** An instructional program that describes the contemporary social and public policy ramifications of science and technology, the interrelationship of science and engineering with the public policy process, and the social and ethical dimensions of scientific and technological enterprises.

30.16 Accounting and Computer Science. (See 30.1601)

30.1601 Accounting and Computer Science. An instructional program that prepares individuals to utilize off-shelf and/or customized software applications in supporting or performing accounting operations.

30.99 **Multi/Interdisciplinary Studies, Other.** (See 30.9999)

30.9999 **Multi/Interdisciplinary Studies, Other.** Any instructional program in single multi/interdisciplinary studies not described above.

31. **PARKS, RECREATION, LEISURE AND FITNESS STUDIES.** A summary of groups of instructional programs that describe the principles and practices of managing parks and other recreational and fitness facilities; providing recreational, leisure and fitness services; and the study of human fitness.

31.01 **Parks, Recreation and Leisure Studies.** (See 31.0101)

31.0101 **Parks, Recreation and Leisure Studies.** An instructional program that describes the study of the principles underlying recreational and leisure activities, and the practices involved in providing indoor and outdoor recreational facilities and services for the general public.

31.03 **Parks, Recreation and Leisure Facilities Management.** (See 31.0301)

31.0301 **Parks, Recreation and Leisure Facilities Management.** An instructional program that prepares individuals to develop and manage park facilities and other indoor and outdoor recreation and leisure facilities. Includes instruction in supervising support personnel, health and safety standards, public relations, and basic business and marketing principles.

31.05 **Health and Physical Education/Fitness.** A group of instructional programs that describe the study of human physiology and behavior as applied to sports, and the leadership and management of physical fitness and sports services.

31.0501 **Health and Physical Education, General.** An instructional program that generally describes the study and practice of activities and principles that promote physical fitness, achieve and maintain athletic prowess, and accomplish related research and service goals. Includes instruction in human movement studies, motivation studies, rules and practice of specific sports, exercise and fitness principles and techniques, basic athletic injury prevention and treatment, and organizing and leading fitness and sports programs.

------ **Health Teacher Education.** (Refer to 13.1307)

------ **Physical Education Teaching and Coaching.** (Refer to 13.1314)

31.0502 **Adapted Physical Education/Therapeutic Recreation.** An instructional program that describes the provision of physical education and fitness instruction and therapy to children and adults with special learning needs, disabilities, or diagnosed medical conditions, and that prepares individuals to provide and supervise appropriate activities for such persons. Includes instruction in the planning and administration of adapted and therapeutic fitness programs; the supervision of special fitness and rehabilitative students and clients; student and patient counseling and referral; record-keeping; and applicable legal and administrative regulations.

31.0503 **Athletic Training and Sports Medicine.** An instructional program that prepares individuals to prevent and treat athletic injuries, to perform related rehabilitative therapy, and to manage the provision of health and treatment services to athletes. Includes instruction in basic sports medicine, dietetics, movement and motivation sciences, administering preventive and treatment remedies, equipment maintenance, clinic management, and patient education and counseling.

31.0504 **Sport and Fitness Administration/Management.** An instructional program that prepares individuals to apply business, coaching and physical education principles to the organization, administration and management of athletic programs and teams, fitness/rehabilitation facilities and health clubs, sport recreation services, and related services. Includes instruction in program planning and development; business and financial management principles; sales, marketing and recruitment; event promotion, scheduling and management; facilities management; public relations; legal aspects of sports; and applicable health and safety standards.

31.0505 **Exercise Sciences/Physiology and ~~Movement Studies~~** ***Kinesiology*****.** An instructional program that describes the scientific study of the anatomy, physiology, biochemistry, and biophysics of human movement, and applications to exercise and therapeutic rehabilitation. Includes instruction in biomechanics, motor behavior, motor development and coordination, motor neurophysiology, performance research, rehabilitative therapies, the development of diagnostic and rehabilitative methods and equipment, and related analytical methods and procedures.

~~31.0506 **[Socio-Psychological Sports Studies.]** An instructional program that describes the scientific study of human motivation as applied to athletic performance, and the related social and cultural factors affecting the organization and behavior of sports and participants. Includes instruction in sports psychology, sociology of sports, studies of sports and coaching theory, motivational research, and the psychological aspects of motor behavior.~~ (Deleted, included under 31.0599)

31.0599 **Health and Physical Education/Fitness, Other.** Any instructional program in health and physical education/fitness not described above.

31.99 **Parks, Recreation, Leisure and Fitness Studies, Other.** (See 31.9999)

31.9999 **Parks, Recreation, Leisure and Fitness Studies, Other.** Any instructional program in parks, recreation, leisure and fitness studies not described above.

32. **~~[BASIC SKILLS.~~]**. (Moved to **CHAPTER V:PERSONAL IMPROVEMENT AND LEISURE PROGRAMS**)

33. **~~[CITIZENSHIP/CIVIC ACTIVITIES.]~~** (Moved to **CHAPTER V: PERSONAL IMPROVEMENT AND LEISURE PROGRAMS**)

34. **~~[HEALTH-RELATED ACTIVITIES.]~~** (Moved to **CHAPTER V: PERSONAL IMPROVEMENT AND LEISURE PROGRAMS**)

35. **~~[INTERPERSONAL SKILLS.]~~** (Moved to **CHAPTER V: PERSONAL IMPROVEMENT AND LEISURE PROGRAMS**)

36. **~~[LEISURE AND RECREATIONAL ACTIVITIES.]~~** (Moved **to CHAPTER V: PERSONAL IMPROVEMENT AND LEISURE PROGRAMS**)

37. **~~[PERSONAL AWARENESS.]~~** (Moved to CHAPTER V: **PERSONAL IMPROVEMENT AND LEISURE PROGRAMS**)

38. **PHILOSOPHY AND RELIGION.** A summary of groups of instructional programs that describe the study of modes, methods and types of logical inquiry; and the study of organized systems of belief and related practices.

38.01 **Philosophy.** (See 38.0101).

38.0101 **Philosophy.** An instructional program that describes the study of ideas and their logical structure, including arguments and investigations about abstract and real phenomena. Includes instruction in logic, ethics, aesthetics, epistemology, metaphysics, symbolism, and history of philosophy, and applications to the theoretical foundations and methods of other disciplines.

------ **Logic.** (Refer to 27.0105)

38.02 **Religion/Religious Studies.** (See 38.0201).

38.0201 **Religion/Religious Studies.** An instructional program that describes the study of the nature of religious belief and specific religious and quasi-religious systems. Includes instruction in phenomenology; the sociology, psychology, philosophy, anthropology, literature and art of religion; mythology; scriptural and textual studies; religious history and politics; and specific studies of particular faith communities and their behavior.

------ **Islamic Studies.** (Refer to 05.0204)
------ **Jewish/Judaic Studies.** (Refer to 05.0205)

38.99 **Philosophy and Religion, Other.** (See 38.9999)

38.9999 **Philosophy and Religion, Other.** Any instructional program in philosophy and religion not described above.

39. **THEOLOGICAL STUDIES AND RELIGIOUS VOCATIONS.** A summary of groups of instructional programs that describe the study of religious beliefs, doctrines, and practices from the intramural standpoint of a particular faith; and that prepare individuals for the professional practice of religious vocations.

39.01 **Biblical and Other Theological Languages and Literatures.** (See 39.0101)

------ **Middle Eastern Languages and Literatures.** (Refer to 16.11 Series)

------ **Classical and Ancient Near Eastern Languages and Literatures.** (Refer to 16.12 Series)

39.0101 **Biblical and Other Theological Languages and Literatures.** An instructional program that describes the study of liturgical, scriptural and historical languages and literatures used by Christianity, Judaism, and other major faiths as vehicles for communicating doctrine, forms of worship, rules, and traditions. Includes instruction in translation techniques, textual analysis and criticism, the study and preservation of ancient manuscripts, and studies of specific languages such as Hebrew, Koine Greek, Biblical Aramaic, and others.

39.02 **Bible/Biblical Studies.** (See 39.0201).

39.0201 **Bible/Biblical Studies.** An instructional program that describes the study of the Bible and its component books from the standpoint of the Christian or Jewish faiths, with an emphasis on understanding and interpreting the theological, doctrinal, and ethical messages contained within it. May include preparation for applying these studies in various church-related vocations.

39.03 **Missions/Missionary Studies and Missiology.** (See 39.0301).

39.0301 **Missions/Missionary Studies and Missiology.** An instructional program that describes the theory and practice of Christian or other religious outreach, social service and proselytization, and that prepares individuals for mission vocations.

39.04 **Religious Education.** (See 39.0401).

39.0401 **Religious Education.** An instructional program that describes the theory and practice of providing educational services to members of faith communities, within the context of a particular religion, and that prepares individuals to serve as religious educators. Includes instruction in planning and teaching lessons; organizing and supervising instructional activities; designing and developing instructional materials; and administering religious education programs and facilities.

39.05 **Religious/Sacred Music.** (See 39.0501).

------ **Music.** (Refer to 50.09 Series)

39.0501 **Religious/Sacred Music.** An instructional program that describes the history, theory, composition, and performance of music for religious or sacred purposes, and that prepares individuals for religious musical vocations such as choir directors, Cantors, organists, and chanters.

39.06 **Theological and Ministerial Studies.** A group of instructional programs that prepare individuals for the professionals study and practice of theology and ministry.

39.0601 **Theology/Theological Studies.** An instructional program that describes the study of the beliefs and doctrine of a particular religious faith from the intramural point of view of that faith. Includes instruction in systematic theology, historical theology, moral theology, doctrinal studies, dogmatic, apologetics, and applications to specific questions of ecclesiastical polity and religious life.

39.0602 **Divinity/Ministry (BD, MDiv.).** An instructional program that prepares individuals for ordination as ministers or priests in any of the Christian religious traditions. Includes instruction in the theology and polity of a particular church, liturgy, principles of pastoral ministry, homiletics, basic church/parish organization and management, and related studies.

39.0603 **Rabbinical and Talmudic Studies (M.H.L./Rav).** An instructional program that prepares individuals for ordination as Rabbis in the Orthodox, Conservative and Reformed Jewish traditions; and that describes the specialized devotional study of Jewish law and sacred writings.

------ **Jewish/Judaic Studies.** (Refer to 05.0205)

39.0604 **Pre-Theology/Pre-Ministerial Studies.** An instructional program that prepares individuals to enter a seminary or other program leading to religious ordination, or a related religious vocation.

39.0605 Ordination, Other Than Divinity/Ministry and Rabbinical. (Definition to be developed – suggestions welcome)

39.0606 Talmudic Studies, Pre-Rabbinical. (Definition to be developed – suggestions welcome)

39.0699 **Theological and Ministerial Studies, Other.** An instructional program in theological and ministerial studies not described above, including preparation for religious vocations in faiths other than Christianity and Judaism.

39.07 Pastoral Counseling and Specialized Ministries. (See 39.0701-39.0799).

39.0701 Clinical Pastoral Counseling. An instructional program that prepares ordained clergy to provide specialized counseling services in clinical settings and to practice as certified clinicians. Includes instruction in clinical, normal, and counseling psychology; crisis intervention; individual and group therapy; and related legal and administrative responsibilities.

39.0799 Pastoral Counseling and Specialized Ministries, Other. An instructional program that prepares ordained clergy and other religious vocations in the principles and methods of pastoral practice in such areas as counseling, marriage and family therapy, youth ministry, outreach and evangelism, ministry to special populations, advanced leadership and management skills, and other studies.

------ **Counseling Psychology.** (Refer to 42.0601)

39.99 **Theological Studies and Religious Vocations, Other.** (See 39.9999)

39.9999 **Theological Studies and Religious Vocations, Other.** Any instructional program in theological studies and religious vocations not described above.

40. **PHYSICAL SCIENCES**. A summary of groups of instructional programs that describe the scientific study of inanimate objects, processes of matter and energy, and associated phenomena.

40.01 **Physical Sciences, General**. (See 40.0101).

40.0101 **Physical Sciences, General.** An instructional program that generally describes the major topics, concepts, processes, and interrelationships of physical phenomena as studied in any combination of physical science disciplines.

40.02 **Astronomy.** (See 40.0201).

40.0201 **Astronomy.** An instructional program that describes the scientific study of matter and energy in the universe, using observational techniques such as spectroscopy, photometry, interferometry, radio astronomy and optical astronomy. Includes instruction in celestial mechanics, cosmology, and stellar physics; and applications to research on lunar, planetary, solar, stellar, and galactic phenomena.

40.03 **Astrophysics.** (See 40.0301).

40.0301 **Astrophysics.** An instructional program that describes the scientific and mathematical study of the behavior of astronomical phenomena and related physio-chemical interactions, and the experimental laboratory simulation of these phenomena. Includes instruction in cosmology, plasma kinetics, stellar physics, convolution and non-equilibrium radiation transfer theory, non-Euclidean geometries, mathematical modeling, galactic structure theory, and relativistic astronomy.

40.04 **Atmospheric Sciences and Meteorology.** (See 40.0401 - 40.0499).

40.0401 **Atmospheric Sciences and Meteorology, *General*.** An instructional program that describes the scientific study of the composition and behavior of the atmospheric envelopes surrounding the earth and other planets, the effect of earth's atmosphere on terrestrial weather, and related problems of environment and climate. Includes instruction in atmospheric chemistry and physics, atmospheric dynamics, climatology and climate change, weather simulation, weather forecasting, climate modeling and mathematical theory; and studies of specific phenomena such as clouds, weather systems, storms, and precipitation patterns.

40.0402 Atmospheric Physics and Chemistry. (Definition to be developed – suggestions welcome)

40.0403 Atmospheric Dynamics. (Definition to be developed – suggestions welcome)

40.0404 Meteorology. (Definition to be developed – suggestions welcome)

40.0499 Atmospheric Sciences and Meteorology, Other. Any instructional program in atmospheric sciences and meteorology not described above.

40.05 **Chemistry**. (See 40.0501)

40.0501 **Chemistry, General.** A group of instructional programs that generally describes the scientific study of the composition and behavior of matter, including its micro- and macro-structure, the processes of chemical change, and the theoretical description and laboratory simulation of these phenomena.

------ **Chemistry Teacher Education.** (Refer to 13.1323)

------ **Chemical Engineering.** (Refer to 14.0701)

40.0502 **Analytical Chemistry.** An instructional program that describes the scientific study of techniques for analyzing and describing matter, including its precise composition and the interrelationships of constituent elements and compounds. Includes instruction in spectroscopy, chromatography, atomic absorption, photometry, chemical modeling, mathematical analysis, laboratory analysis procedures and equipment maintenance, and applications to specific research, industrial and health problems.

40.0503 **Inorganic Chemistry.** An instructional program that describes the scientific study of the elements and their compounds, other than the hydrocarbons and their derivatives. Includes instruction in the characterization and synthesis of non-carbon molecules, including their structure and their bonding, conductivity, and reactive properties; research techniques such as spectroscopy, X-ray diffraction, and photoelectron analysis; and the study of specific compounds, such as transition metals, and compounds composed of inorganic and organic molecules.

40.0504 **Organic Chemistry.** An instructional program that describes the scientific study of the properties and behavior of hydrocarbon compounds and their derivatives. Includes instruction in molecular conversion and synthesis, the molecular structure of living cells and systems, the mutual reactivity of organic and inorganic compounds in combination, the spectroscopic analysis of hydrocarbon compounds, and applications to specific problems in research, industry, and health.

40.0505 **Medicinal/Pharmaceutical Chemistry.** An instructional program that describes the scientific study of the structural and reactive properties of natural and synthetic compounds intended for applications to human or animal medicine, pharmaceutical industrial uses, or treatment of plant disease. Includes instruction in molecular synthesis, drug design, properties of natural organic compounds, cosmetic chemistry, chemical manufacturing systems, drug behavior and host metabolism, and specific applications to health and industrial problems.

------ **Pharmaceutical and Pharmacological Sciences.** (Refer to 51.2003)

40.0506 **Physical and Theoretical Chemistry.** An instructional program that describes the scientific study of the theoretical properties of matter, and the relation of physical forces and phenomena to the chemical structure and behavior of molecules and other compounds. Includes instruction in reaction theory, calculation of potential molecular properties and behavior, computer simulation of structures and actions, transition theory, statistical mechanics, phase studies, quantum chemistry, and the study of surface properties.

40.0507 **Polymer Chemistry.** An instructional program that describes the scientific study of synthesized macromolecule and their interactions with other substances. Includes instruction in molecular bonding theory, polymerization, properties and behavior of unstable compounds, the development of tailored polymers, transition phenomena, and applications to specific industrial problems and technologies.

------ **Polymer/Plastics Engineering.** (Refer to 14.3201)

40.0508 Nuclear Chemistry. (Definition to be developed – suggestions welcome)

40.0599 **Chemistry, Other.** Any instructional program in chemistry not described above.

40.06 **Geological and Related Sciences.** A group of instructional programs that describe the natural history and physical properties of the earth.

40.0601 **Geology, *General*.** An instructional program that describes the scientific study of the earth; the forces acting upon it; and the behavior of the solids, liquids and gases comprising it. Includes instruction in historical geology, geomorphology, and sedimentology, the chemistry of rocks and soils, stratigraphy, mineralogy, petrology, geostatistics, volcanology, glaciology, geophysical principles, and applications to research and industrial problems.

------ **Geological Engineering and Geophysical Engineering.** (Refer to 14.1501)

40.0602 **Geochemistry.** An instructional program that describes the scientific study of the chemical properties and behavior of the silicates and other substances forming, and formed by geomorphological processes of the earth and other planets. Includes instruction in chemical thermodynamics, equilibrium in silicate systems, atomic bonding, isotopic fractionation, geochemical modeling, specimen analysis, and studies of specific organic and inorganic substances.

40.0603 **Geophysics and Seismology.** An instructional program that describes the scientific study of the physics of solids and its application to the study of the earth and other planets. Includes instruction in gravimetric, seismology, earthquake forecasting, magnetrometry, electrical properties of solid bodies, plate tectonics, thermodynamics, remote sensing, and laboratory simulations of geological processes.

40.0604 **Paleontology.** An instructional program that describes the scientific study of extinct life forms and associated fossil remains, and the reconstruction and analysis of ancient life forms, ecosystems, and geologic processes. Includes instruction in sedimentation and fossilization processes, fossil chemistry, evolutionary biology and paleobiology, field research methods, and laboratory research and conservation methods; as well as studies of specific subjects such as paleoecology, paleoclimatology, trace fossils, micropaleontology, invertebrate paleontology, vertebrate paleontology, and paleobotany.

40.0605 Mineralogy and Petrology. (Definition to be developed – suggestions welcome)

40.0606 Stratigraphy and Sedimentology . (Definition to be developed – suggestions welcome)

40.0607 Geomorphology and Glacial Geology. (Definition to be developed – suggestions welcome)

40.0699 **Geological and Related Sciences, Other**. Any instructional program in geological and related sciences not described above.

40.07 **Miscellaneous Physical Sciences.** A group of instructional programs that describe specialized areas of the physical sciences not in the other physical sciences groupings.

~~40.0701 **[Metallurgy.]** An instructional program that describes the scientific study of the chemical and physical properties of metals and related compounds in their solid, liquid, and gaseous states, together with applications to industrial problems. Includes instruction in x-ray diffraction, metallurgical microscopy, solid-state chemistry, thermodynamics of solids and solutions, crystallography, surface physics, molecular bonding, electrodynamics of metals, elasticity and mechanical properties, and processing behavior.~~ (Deleted, included under 40.9999)

40.0702 **Oceanography.** An instructional program that describes the scientific study of the oceans and associated phenomena, including the land/water and water/atmosphere boundaries. Includes instruction in physical oceanography, marine chemistry, marine geology, and biological oceanography; and applications to specific research problems such as coastal erosion, seawater corrosion and reactive behavior, seafloor volcanism, underwater acoustics and optics, oceanic environments and conservation, and global climate change.

------ **Ocean Engineering.** (Refer to 14.2401)

40.0703 **Earth and Planetary Sciences.** An instructional program that describes the scientific study of the earth and other planets as comprehensive physical systems incorporating solid, liquid, gas, and radiation constituents, as well as exhibiting interactions with other systems. Includes instruction in planetary evolution, gravitational physics, atmospheric evolution, volcanism and crustal movement studies, organic systems and ecologies, orbital mechanics, radiation physics, and the study of planetary and satellite systems.

40.0704 Hydrology and Water Resources. (Definition to be developed – suggestions welcome)

40.0705 Marine Sciences. (Definition to be developed – suggestions welcome)

40.0799 **Miscellaneous Physical Sciences, Other.** Any instructional program in miscellaneous physical sciences not described above.

40.08 **Physics**. (See 40.0801)

40.0801 **Physics, General.** An instructional program that generally describes the scientific study of matter and energy, and the formulation and testing of the laws governing the behavior of the matter-energy continuum. Includes instruction in classical and modern physics, electricity and magnetism, thermodynamics, mechanics, wave properties, nuclear processes, relativity and quantum theory, quantitative methods, and laboratory methods.

------ **Physics Teacher Education.** (Refer to 13.1329)

------ **Engineering Physics.** (Refer to 14.1201)

------ **Biophysics.** (Refer to 26.0203)

------ **Medical Biophysics.** (Refer to 51.1304)

40.0802 **Chemical and Atomic/Molecular Physics.** An instructional program that describes the scientific study of the behavior of matter-energy phenomena at the level of atoms and molecules. Includes instruction in chemical physics, atomic forces and structure, fission reactions, molecular orbital theory, magnetic resonance, molecular bonding, phase equilibria, quantum theory of solids, and applications to the study of specific elements and higher compounds.

40.0804 **Elementary Particle Physics.** An instructional program that describes the scientific study of the basic constituents of sub-atomic matter and energy, and the forces governing fundamental processes. Includes instruction in quantum theory, field theory, single-particle systems, perturbation and scattering theory, matter-radiation interaction, symmetry, quarks, capture, Schroedinger mechanics, methods for detecting particle emission and absorption, and research equipment operation and maintenance.

40.0805 **Plasma and High-Temperature Physics.** An instructional program that describes the scientific study of the properties and behavior of matter at high temperatures, such that molecular and atomic structures are in a disassociated ionic or electronic state. Includes instruction in magnetohydrodynamics, free electron phenomena, fusion theory, electromagnetic fields and dynamics, plasma and non-linear wave theory, instability theory, plasma shock phenomena, quantitative modeling, and research equipment operation and maintenance.

40.0806 **Nuclear Physics.** An instructional program that describes the scientific study of the properties and behavior of atomic nuclei instruction in nuclear reaction theory, quantum mechanics, energy conservation, nuclear fission and fusion, strong and weak atomic forces, nuclear modeling, nuclear decay, nucleon scattering, pairing, photon and electron reactions, statistical methods, and research equipment operation and maintenance.

------ **Nuclear Engineering.** (Refer to 14.2301)

40.0807 **Optics.** An instructional program that describes the scientific study of light energy, including its structure, properties and behavior under different conditions. Includes instruction in wave theory, wave mechanics, electromagnetic theory, physical optics, geometric optics, quantum theory of light, photon detecting, laser theory, wall and beam properties, chaotic light, non-linear optics, harmonic generation, optical systems theory, and applications to engineering problems.

40.0808 **Solid State and Low-Temperature Physics.** An instructional program that describes the scientific study of solids and related states of matter at low energy levels, including liquids and dense gases. Includes instruction in statistical mechanics, quantum theory of solids, many-body theory, low temperature phenomena, electron theory of metals, band theory, crystalline structures, magnetism and superconductivity, equilibria and dynamics of liquids, film and surface phenomena, quantitative modeling, and research equipment operation and maintenance.

40.0809 **Acoustics**. An instructional program that describes the scientific study of sound, and the properties and behavior of acoustic wave phenomena under different conditions. Includes instruction in wave theory, the acoustic wave equation, energy transformation, vibration phenomena, sound reflection and transmission, scattering and surface wave phenomena, singularity expansion theory, ducting, and applications to specific research problems such as underwater acoustics, crystallography, and health diagnostics.

40.0810 **Theoretical and Mathematical Physics.** An instructional program that describes the scientific and mathematical formulation and evaluation of the physical laws governing, and models describing, matter-energy phenomena, and the analysis of related experimental designs and results. Includes instruction in classical and quantum theory, relativity theory, field theory, mathematics of infinite series, vector and coordinate analysis, wave and particle theory, advanced applied calculus and geometry, analyses of continuum, cosmology, and statistical theory and analysis.

40.0811 Fluids. (Definition to be developed – suggestions welcome)

40.0812 Polymer Physics. (Definition to be developed – suggestions welcome)

40.0899 **Physics, Other.** Any instructional program in physics not described above.

40.99 **Physical Sciences, Other.** (See 40.9999)

40.9999 **Physical Sciences, Other.** Any instructional program in physical sciences not described above.

41. **SCIENCE TECHNOLOGIES/*TECHNICIANS***. A summary of groups of instructional programs that prepare individuals to apply scientific principles and technical skills in support of scientific research and development.

41.01 **Biological *Technologies/Technicians*.** (See 41.0101)

41.0101 **Biological Technology/Technician.** An instructional program that prepares individuals to apply scientific principles and technical skills in support of biologists in research and industrial settings. Includes instruction in field research and laboratory methods.

------ **Health and Medical Laboratory Technologies.** (Refer to 51.10 Series)

41.02 **Nuclear and Industrial Radiologic Technologies/*Technicians*.** A group of instructional programs that prepare individuals to apply scientific principles and technical skills in support of design, testing and operational procedures related to the industrial use of radioisotopes and nuclear energy.

41.0204 **Industrial Radiologic Technology/Technician.** An instructional program that prepares individuals to apply scientific principles and technical skills to the operation of industrial and research testing equipment using radioisotopes. Includes instruction in x-ray analysis of materials, nondestructive testing and inspection of materials, and continuous measurement of paper or metal thickness.

41.0205 **Nuclear/Nuclear Power Technology/Technician.** An instructional program that prepares individuals to apply scientific principles and technical skills in support of research scientists and operating engineers engaged in the running of nuclear reactors, and in nuclear materials processing and disposal. Includes instruction in basic nuclear physics and nuclear engineering, monitoring and safety procedures, radioactive materials handling and disposal, equipment maintenance and operation, and record keeping.

41.0299 **Nuclear and Industrial Radiologic Technologies/Technicians, Other.** Any instructional program in nuclear and industrial radiologic technologies not described above.

41.03 **Physical Science Technologies/*Technicians*.** A group of instructional programs that prepare individuals to apply scientific principles and technical skills in support of physical science research and development projects.

41.0301 **Chemical Technology/Technician.** An instructional program that prepares individuals to apply scientific principles and technical skills in support of chemical research and industrial operations. Includes instruction in laboratory research methods, industrial processing methods and equipment, and instrumentation and test equipment operation and maintenance.

41.0399 **Physical Science Technologies/Technicians, Other.** Any instructional program in physical science technologies not described above.

41.04 Scientific Laboratory Technologies/Technicians. (See 41.0401)

41.0401 Scientific Laboratory Technology/Technician (Definition to be developed – suggestions welcome)

41.99 **Science Technologies/*Technicians*, Other**. (See 41.9999)

41.9999 **Science Technologies/Technicians, Other.** Any instructional program in science technologies not described above.

42. **PSYCHOLOGY**. A summary of groups of instructional programs that describe the scientific study of the behavior of individuals, independently or collectively, and the physical and environmental bases of mental, emotional and neurological activity.

42.01 **Psychology, General.** (See 42.0101).

42.0101 **Psychology, General.** An instructional program that generally describes the scientific study of individual and collective behavior, the physical and environmental bases of behavior, and the analysis and treatment of behavior problems and disorders. Includes instruction in the principles of the various subfields of psychology, research methods, and psychological assessment and testing methods.

42.02 **Clinical Psychology.** (See 42.0201).

42.0201 **Clinical Psychology.** An instructional program that prepares individuals for the independent professional practice of clinical psychology, involving the analysis, diagnosis, and clinical treatment of psychological disorders and behavioral pathologies. Includes instruction in clinical assessment and diagnosis, personality appraisal, psychopathology, clinical psychopharmacology, behavior modification, therapeutic intervention skills, patient interviewing, personalized and group therapy, child and adolescent therapy, cognitive and behavioral therapy, supervised clinical practice, ethical standards, and applicable regulations.

42.03 **Cognitive Psychology and Psycholinguistics.** (See 42.0301)

42.0301 **Cognitive Psychology and Psycholinguistics.** An instructional program that describes the scientific study of the mechanisms and processes of learning and thinking, and associated information encoding, decoding, processing and transmitting systems. Includes instruction in theories of cognition and intelligence; studies of cognitive processes such as memory, sensation, perception, pattern recognition, problem solving, and conceptual thinking; cybernetics; psycholinguistics; and the study of biological and social communications mechanisms and processes.

------ **Linguistics.** (Refer to 16.0102)

42.04 **Community Psychology.** (See 42.0401).

42.0401 **Community Psychology.** An instructional program that prepares individuals to apply psychological principles to the analysis of social problems, and the implementation of intervention strategies for addressing these problems. Includes instruction in social ecology, primary and secondary prevention of social pathologies, social intervention strategies and tactics, large group counseling, social services systems behavior, creating settings, cultural stress, and the dynamics of social change.

------ **Community, Organization, Resources and Services.** (Refer to 44.0201)

------ **Community Health Liaison.** (Refer to 51.0301)

42.05 Comparative Psychology. ***(See 42.0501)***

42.0501 Comparative Psychology. ***An instructional program that describes the behavior of members of particular species or groups and the relationship of the behaviors of the species or group to their evolutionary origins. (Restored)***

42.06 **Counseling Psychology.** (See 42.0601)

42.0601 **Counseling Psychology.** An instructional program that prepares individuals for the independent professional practice of psychological counseling, involving the rendering of therapeutic services to individuals and groups experiencing psychological problems and exhibiting distress symptoms. Includes instruction in counseling theory, therapeutic intervention strategies, patient/counselor relationships, testing and assessment methods and procedures, group therapy, marital and family therapy, child and adolescent therapy, supervised counseling practice, ethical standards, and applicable regulations.

------ **Counselor Education/Counseling and Guidance Services.** (Refer to 13.1101)

------ **College/Postsecondary Student Counseling and Personnel Services.** (Refer to 13.1102)

------ **Family and Marriage Counseling.** (Refer to 42.1901, Moved from 19.0703)

------ **Pastoral Counseling and Specialized Ministries.** (Refer to 39.07)

42.07 **Developmental and Child Psychology.** (See 42.0701).

42.0701 **Developmental and Child Psychology.** An instructional program that describes the scientific study of the psychological growth and development of individuals from infancy through adulthood. Includes instruction in cognitive and perceptual development, emotional development, personality development, the effects of biological maturation on behavior, theories of cognitive growth and related research methods, testing and assessment methods for different age levels, research on child and adolescent behavior therapy, and the psychology of aging. (Family and Human Development Studies/Individual and Family Development Studies, General, has been integrated into Developmental and Child Psychology because definitions are virtually the same for the two programs).

42.08 **Experimental Psychology**. (See 42.0801).

42.0801 **Experimental Psychology.** An instructional program that describes the scientific study of behavior under experimental conditions and the analysis of controlled behavioral responses. Includes instruction in learning theory, research design and experimental methods, psychological measurement, statistical design and methods, analysis of cognitive and behavioral variables, and the conduct of specialized and large-scale studies.

42.09 **Industrial and Organizational Psychology.** (See 42.0901).

42.0901 **Industrial and Organizational Psychology.** An instructional program that describes the scientific study of individual and group behavior in institutional settings, applications to related problems of organization and industry, and that may prepare individuals to apply such principles in industrial and organizational settings. Includes instruction in group behavior theory, organizational theory, reward/punishment structures, human-machine and human-computer interactions, motivation dynamics, human stress studies, environmental and organizational influences on behavior, alienation and satisfaction, and job testing and assessment.

------ **Human Resources Management.** (Refer to 52.1001)

------ **Organizational Behavior Studies.** (Refer to 52.1003)

42.10 Personality Psychology. (See 42.1001)

42.1001** **Personality Psychology. An instructional program that describes the unique organization of fairly permanent characteristics that set the individual apart from other individuals and, at the same time, determine how others respond to that individual. (Restored)

42.11 **Physiological Psychology/Psychobiology.** (See 42.1101)

42.1101 **Physiological Psychology/Psychobiology.** An instructional program that describes the scientific study of the biological bases of psychological functioning, and their application to experimental and therapeutic research problems. Includes instruction in functional neuroanatomy, neural system development, biochemical neural regulatory mechanisms, neurological biophysics, memory storage and retrieval, physiology of cognition and perception, physiological bases of psychopathology and behavioral disorders, psychopharmacology, comparative psychobiology, and specialized experimental design and research methods.

------ **Biopsychology.** (Refer to 30.1001)

------ **Physiology.** (Refer to 26.0706)

------ **Medical Physiology.** (Refer to 51.1313)

42.13 Psychometrics. (See 42.1301)

42.1301 Psychometrics. An instructional program that describes the mathematical and statistical procedures used in psychological test construction and validation, and the general problems of the measurement of behavior. (Restored)

42.15 Quantitative Psychology. (See 42.1501)

42.1501 Quantitative Psychology. An instructional program that describes the application of mathematical and statistical models and methodology in psychology. (Restored)

42.16 **Social Psychology**. (See 42.1601).

42.1601 **Social Psychology.** An instructional program that describes the scientific study of individual behavior in group contexts, group behavior, and associated phenomena. Includes instruction in social learning theory, group theory and dynamics, sex roles, social cognition and inference, attribution theory, attitude formation, criminal behavior and other social pathologies, altruistic behavior, social development, and social ecology.

------ **Sociology.** (Refer to 45.1101)

42.17 **School Psychology.** (See 42.1701)

42.1701 **School Psychology.** An instructional program that prepares individuals to apply clinical and counseling psychology principles to the diagnosis and treatment of student behavioral problems. Includes instruction in child and/or adolescent development; learning theory; testing, observation and other procedures for assessing educational, personality, intelligence and motor skill development; therapeutic intervention strategies for students and families; identification and classification of disabilities and disorders affecting learning; school psychological services planning; supervised counseling practice; ethical standards; and applicable regulations.

42.18 Educational Psychology. ***(See 42.1801)***

42.1801 ***Educational Psychology. An instructional program that describes the application of psychology to the study of the behavior of individuals in the roles of teacher and learner, the nature and effects of learning environments, and the psychological effects of methods, resources, organization and non-school experience on the educational process. Includes instruction in learning theory, human growth and development, research methods, and psychological evaluation*** (Moved from 13.0801)

42.19 Family and Marriage Counseling. ***(See 42.1901)***

42.1901 ***Family and Marriage Counseling. An instructional program that describes the study of the factors affecting marital relationships, parent-child relationships, and the functioning of the family as a whole; the study of separation, divorce and remarriage, death, exceptional children, and health and wellness; and the application of therapeutic intervention strategies in appropriate situations.*** (Moved from 19.0703)

42.99 **Psychology, Other.** (See 42.9999)

42.9999 **Psychology, Other.** Any instructional program in psychology not described above.

43. **PROTECTIVE SERVICES.** A summary of groups of instructional programs that describe the principles and procedures for providing police, fire, and other safety services, and for managing penal institutions.

43.01 **Criminal Justice and Corrections.** A group of instructional programs that describe the principles and procedures for conducting and supervising law enforcement, corrections, and security services.

------ **Criminology.** (Refer to 45.04 Series)

43.0102 **Corrections/Correctional Administration.** An instructional program that prepares individuals to apply the theories, principles, and techniques of correctional science to the development, administration and implementation of procedures for the incarceration, supervision, and rehabilitation of legal offenders.

43.0103 **Criminal Justice/Law Enforcement Administration**. An instructional program that prepares individuals to apply the theories and practices of criminal justice to structuring, managing, directing, and controlling criminal justice agencies, including police departments, sheriff's departments, law enforcement divisions and units, and private protective services.

43.0104 **Criminal Justice Studies.** An instructional program that describes the study of the criminal justice system, its organizational components and processes, and its legal and public policy contexts. Includes instruction in criminal law and policy, police and correctional systems organization, the administration of justice and the judiciary, and public attitudes regarding criminal justice issues.

43.0106 **Forensic Technology/Technician.** An instructional program that prepares individuals to conduct crime scene and laboratory analyses and evaluations of evidentiary materials, including human remains, under the supervision of a pathologist, forensic administrator or other law enforcement personnel. Includes instruction in principles of pathology, laboratory technology and procedures, dusting and fingerprinting, reconstructive analysis and related skills.

43.0107 **Law Enforcement/Police Science.** An instructional program that prepares individuals to perform the duties of police and public security officers, including patrol and investigative activities, traffic control, crowd control and public relations, witness interviewing, evidence collection and management, basic crime prevention methods, weapon and equipment operation and maintenance, report preparation, and other routine law enforcement responsibilities.

43.0109 **Security and Loss Prevention Services.** An instructional program that prepares individuals to perform routine inspection, patrol and crime prevention services for private clients. Includes instruction in the provision of personal protection as well as property security.

43.0199 **Corrections and Criminal Justice, Other.** Any instructional program in corrections and criminal justice not described above.

43.02 **Fire Protection**. A group of instructional programs that prepare individuals to perform firefighting and related services.

43.0201 **Fire Protection and Safety Technology/Technician**. An instructional program that prepares individuals to apply a knowledge of fire prevention and control skills to problems of reducing fire risk, loss limitation, supervising substance removal, conducting fire investigations, and advising on matters of safety procedures and fire prevention policy.

43.0202 **Fire Services Administration.** An instructional program that prepares individuals to structure, manage, direct, and control fire departments, fire prevention services, fire inspection and investigation offices, and ancillary rescue services.

43.0203 **Fire Science/Firefighting.** An instructional program that prepares individuals to perform the duties of fire fighters. Includes instruction in firefighting equipment operation and maintenance, principles of fire science and combustible substances, methods of controlling different types of fires, hazardous material handling and control, fire rescue procedures, public relations, and applicable laws and regulations.

------ **Emergency Medical Technology/Technician.** (Refer to 51.0904)

43.0299 **Fire Protection, Other.** Any instructional program in fire protection not described above.

43.99 **Protective Services, Other.** (See 43.9999)

43.9999 **Protective Services, Other.** Any instructional program in protective services not described above.

44. **PUBLIC ADMINISTRATION AND SERVICES.** A summary of groups of instructional programs that prepare individuals to analyze, manage, and deliver public programs and services.

44.02 **Community Organization, Resources and Services.** (See 44.0201).

44.0201 **Community Organization, Resources and Services.** An instructional program that describes the theories, principles, and practice of providing services to communities, organizing communities and neighborhoods for social action, serving as community liaisons to public agencies, and using community resources to furnish information, instruction, and assistance to all members of a community. May prepare individuals to apply such knowledge and skills in community service positions.

------ **Community Psychology.** (Refer to 42.0401)

------ **Community Health Liaison.** (Refer to 51.0301)

44.04 **Public Administration.** (See 44.0401).

44.0401 **Public Administration.** An instructional program that prepares individuals to serve as managers in the executive arm of local, state, and federal government; and that describes the systematic study of executive organization and management. Includes instruction in the roles, development, and principles of public administration; the management of public policy; executive-legislative relations; public budgetary processes and financial management; administrative law; public personnel management; professional ethics; and research methods.

44.05 **Public Policy Analysis.** (See 44.0501).

44.0501 **Public Policy Analysis.** An instructional program that describes the systematic analysis of public policy issues and decision processes. Includes instruction in the role of economic and political factors in public decision-making and policy formulation; microeconomic analysis of policy issues; resource allocation and decision modeling; cost/benefit analysis; statistical methods; and applications to specific public policy topics.

------ **Natural Resources Management and Policy.** (Refer to 03.0201)

------ **Science, Technology and Society.** (Refer to 30.1501)

44.07 **Social Work.** (See 44.0701)

44.0701 **Social Work.** An instructional program that prepares individuals for the professional practice of social welfare administration and counseling, and that describes the study of organized means of providing basic support services for vulnerable individuals and groups. Includes instruction in social welfare policy; case work planning; social counseling and intervention strategies; administrative procedures and regulations; and specific applications in areas such as child welfare and family services, probation, employment services, and disability counseling.

------ **Clinical and Medical Social Work.** (Refer to 51.1503)

44.99 **Public Administration and Services, Other.** (See 44.9999)

44.9999 **Public Administration and Services, Other.** Any instructional program in public administration and services not described above.

45. **SOCIAL SCIENCES AND HISTORY**. A summary of groups of instructional programs that describe the systematic study of social systems, social institutions, and social behavior, as well as the study of the human past.

45.01 **Social Sciences, General.** (See 45.0501).

45.0101 **Social Sciences, General.** An instructional program that generally describes the study of human social behavior and social institutions using any of the methodologies common to the social sciences and/or history, or an undifferentiated program of study in the social sciences.

------ **Social Science Teacher Education**. (Refer to 13.1317)

------ **Social Studies Teacher Education.** (Refer to 13.1318)

------ **Liberal Arts and Sciences**. (Refer to 24.0101)

45.02 **Anthropology.** (See 45.0201).

45.0201 **Anthropology**. An instructional program that describes the systematic study of human beings, their antecedents and related primates, and their cultural behavior and institutions, in comparative perspective. Includes instruction in biological/physical anthropology, primatology, human paleontology and prehistoric archeology, hominid evolution, anthropological linguistics, ethnography, ethnology, ethnohistory, socio-cultural anthropology, psychological anthropology, research methods, and applications to areas such as medicine, forensic pathology, museum studies, and international affairs.

------ **AREA, ETHNIC AND CULTURAL STUDIES.** (Refer to 05. Series)

------ **Linguistics.** (Refer to 16.0102)

------ **Museum Studies/Museology.** (Refer to 30.1401)

45.03 **Archeology.** (See 45.0301).

45.0301 **Archeology.** An instructional program that describes the systematic study of extinct societies, and the past of living societies, via the excavation, analysis and interpretation of their artifactual, human, and associated remains. Includes instruction in archeological theory, field methods, dating methods, conservation and museum studies, cultural and physical evolution, and the study of specific selected past cultures.

------ **Classical and Ancient Near Eastern Languages and Literatures.** (Refer to 16.12 Series)

------ **Museum Studies/Museology.** (Refer to 30.1401)

------ **Art History, Criticism and Conservation.** (Refer to 50.0703)

45.04 **Criminology.** (See 45.0401).

45.0401 **Criminology.** An instructional program that describes the systematic study of crime as a sociopathological phenomenon, the behavior of criminals, and the social institutions evolved to respond to crime. Includes instruction in the theory of crime, psychological and social bases of criminal behavior, social value systems and the theory of punishment, criminal law and criminal justice systems, penology, rehabilitation and recidivism, studies of specific types of crime, social attitudes and policy, and applications to specific issues in law enforcement administration and policy.

------ **Corrections and Criminal Justice.** (Refer to 43.01 Series)

------ **Sociology.** (Refer to 45.1101)

45.05 **Demography and Population Studies.** (See 45.0501).

45.0501 **Demography and Population Studies.** An instructional program that describes the systematic study of population models and population phenomena, and related problems of social structure and behavior. Includes instruction in population growth, spatial distribution, mortality and fertility factors, migration, dynamic population modeling, population estimation and projection, mathematical and statistical analysis of population data, population policy studies, and applications to problems in economics and government planning.

------ **Mathematical Statistics.** (Refer to 27.0501)

------ **Sociology.** (Refer to 45.1101)

45.06 **Economics.** (See 45.0601).

45.0601 **Economics, General.** An instructional program that generally describes the systematic study of the production, conservation and allocation of resources in conditions of scarcity, together with the organizational frameworks related to these processes. Includes instruction in economic theory, micro- and macroeconomics, comparative economic systems, money and banking systems, international economics, quantitative analytical methods, and applications to specific industries and public policy issues.

------ **Agricultural Economics.** (Refer to 01.0103)

------ **Business/Managerial Economics.** (Refer to 52.0601)

------ **Consumer Economics and Science.** (Refer to 19.0402)

45.0602 **Applied and Resource Economics.** An instructional program that describes the application of economic principles and analytical techniques to the study of particular industries, activities, or the exploitation of particular resources. Includes instruction in economic theory; microeconomic analysis and modeling of specific industries, commodities; the economic consequences of resource allocation decisions; regulatory and consumer factors; and the technical aspects of specific subjects as they relate to economic analysis.

45.0603 **Econometrics and Quantitative Economics.** An instructional program that describes the systematic mathematical and statistical analysis of economic phenomena and problems. Includes instruction in economic statistics, optimization theory, cost/benefit analysis, price theory, economic modeling, and economic forecasting and evaluation.

------ **Applied Mathematics, General.** (Refer to 27.0301)

------ **Operations Research**. (Refer to 27.0302)

------ **Mathematical Statistics**. (Refer to 27.0501)

45.0604 **Development Economics and International Development.** An instructional program that describes the systematic study of the economic development process and its application to the problems of specific countries and regions. Includes instruction in economic development theory, industrialization, land reform, infrastructural development, investment policy, the role of governments and business in development, international development organizations, and the study of social, health, and environmental influences on economic development.

------ **International Agriculture**. (Refer to 01.0701)

------ **International Relations and Affairs**. (Refer to 45.0901)

45.0605 **International Economics.** An instructional program that describes the systematic study and analysis of international commercial behavior and trade policy. Includes instruction in international trade theory, tariffs and quotas, commercial policy, trade factor flows, international finance and investment, currency regulation and trade exchange rates and markets, international trade negotiation, and international payments and accounting policy.

------ **International Finance**. (Refer to 52.0806)

------ **International Business**. (Refer to 52.1101)

------ **International Business Marketing**. (Refer to 52.1403)

45.0699 **Economics, Other.** Any instructional program in economics not described above.

45.07 **Geography and Cartography.** (See 45.0701-45.0702).

45.0701 **Geography.** An instructional program that describes the systematic study of the spatial distribution and interrelationships of people, natural resources, plant and animal life. Includes instruction in historical and political geography, cultural geography, economic and physical geography, regional science, cartographic methods, remote sensing, spatial analysis, and applications to areas such as land-use planning, development studies, and analyses of specific countries, regions, and resources.

45.0702 **Cartography.** An instructional program that describes the systematic study of map-making and the application of mathematical, computer, and other techniques to the science of mapping geographic information. Includes instruction in cartographic theory and map projections, computer-assisted cartography, map design and layout, photogrammetry, air photo interpretation, remote sensing, cartographic editing, and applications to specific industrial, commercial, research, and governmental mapping problems.

45.08 **History.** (See 45.0801).

45.0801 **History, General.** An instructional program that generally describes the study and interpretation of the past, including the gathering, recording, synthesizing and criticizing of evidence and theories about past events. Includes instruction in historiography; historical research methods; studies of specific periods, issues and cultures; and applications to areas such as historic preservation, public policy, and records administration.

------ **Classical and Ancient Near Eastern Languages and Literatures.** (Refer to 16.12 Series)

------ **Historic Preservation, Conservation and Architectural History.** (Refer to 30.1201)

------ **Medieval and Renaissance Studies.** (Refer to 30.1301)

------ **Drama/Theatre Literature, History and Criticism.** (Refer to 50.0505)

------ ***Art History, Criticism and Conservation.*** (Refer to 50.0703)

------ **Music History and Literature.** (Refer to 50.0902)

45.0802 **American History (United States).** An instructional program that describes the study of the development of American society, culture, and institutions from the Pre-Columbian period to the present. Includes instruction in American historiography, American history sources and materials, historical research methods, and applications to the study of specific themes, issues, periods, and institutions.

------ **American Studies/Civilization.** (Refer to 05.0102)

45.0803 **European History**. An instructional program that describes the study of the development of European society, culture, and institutions from the origins to the present. Includes instruction in European historiography, European history sources and materials, historical research methods, and applications to the study of specific themes, issues, periods, and institutions.

------ **European Studies**. (Refer to 05.0106)

45.0804 **History and Philosophy of Science and Technology**. An instructional program that describes the study of the historical evolution of scientific theories and science applications and technologies, as well as the philosophy of science and its historical socio-economic context. Include instruction in the concepts and methods of philosophical inquiry, historiography of science, and research methods in the history of the scientific and engineering disciplines, including mathematics.

------ **Science, Technology and Society**. (Refer to 30.1501)

45.0805 **Public/Applied History and Archival Administration.** An instructional program that describes the application of history and administrative skills to the recording of public events and the management of related historical resources. Includes instruction in historical research methods, archives and records management, the planning and administration of public records services and history projects, and applications to specific problems in public organizations, government agencies, foundations, and records facilities

45.0806 Asian History. An instructional program that describes the study of the development of the societies, cultures, and institutions of the Asian Continent from their origins to the present. Includes instruction in the historiography of specific cultures and periods; sources and materials; historical research methods; and applications to the study of specific themes, issues, periods, and institutions.

45.0807 Canadian History. An instructional program that describes the study of the society, culture, and institutions of Canada from its origins to the present. Includes instruction in Canadian historiography, sources and materials, historical research methods, and applications to the study of specific themes, issues, periods, and institutions.

------ **Library Science/Librarianship.** (Refer to 25.0101)

------ **Museum Studies/Museology**. (Refer to 30.1401)

45.0899 **History, Other.** Any instructional program in history not described above.

45.09 **International Relations and Affairs.** (See 45.0901).

45.0901 **International Relations and Affairs.** An instructional program that describes the systematic study of international politics and institutions, and the conduct of diplomacy and foreign policy. Includes instruction in international relations theory, foreign policy analysis, national security and strategic studies, international law and organization, the comparative study of specific countries and regions, and the theory and practice of diplomacy.

------ **Area Studies**. (Refer to 05.01 Series)

------ **Peace and Conflict Studies**. (Refer to 30.0501)

------ **Development Economics and International Development**. (Refer to 45.0604)

45.10 **Political Science and Government.** (See 45.1001).

45.1001 **Political Science and Government, General.** An instructional program that describes the systematic study of political institutions and behavior. Includes instruction in political philosophy, political theory, comparative government and politics, political parties and interest groups, public opinion, political research methods, studies of the government and politics of specific countries, and studies 0f specific political institutions and processes.

------ **International Relations and Affairs.** (Refer to 45.0901)

45.1002 **American Government and Politics (United States).** An instructional program that describes the systematic study of United States political institutions and behavior. Includes instruction in American political theory, political parties and interest groups, state and local governments, Constitutional law, federalism and national institutions, executive and legislative politics, judicial politics, popular attitudes and media influences, political research methods, and applications to the study of specific issues and institutions.

------ **American Studies/Civilization**. (Refer to 05.0102)

------ **Public Administration**. (Refer to 44.0401)

------ **Public Policy Analysis**. (Refer to 44.0501)

45.1003 Canadian Government and Politics. An instructional program that describes the systematic study of Canadian political institutions and behavior. Includes instruction in British and North American political theory, political parties and interest groups, provincial and local governments, Constitutional law, federalism and national institutions, executive and legislative politics, judicial politics, popular attitudes and media influences, political research methods, and applications to the study of specific issues and institutions.

45.1099 **Political Science and Government, Other**. Any instructional program in political science and government not described above.

45.11 **Sociology**. (See 45.1101).

45.1101 **Sociology.** An instructional program that describes the systematic study of human social institutions and social relationships. Includes instruction in social theory, sociological research methods, social organization and structure, social stratification and hierarchies, dynamics of social change, family structures, social deviance and control, and applications to the study of specific social groups, social institutions, and social problems.

------ **Area, Ethnic and Cultural Studies**. (Refer to 05. Series)

------ **Social Psychology**. (Refer to 42.1601)

------ **Social Work**. (Refer to 44.0701)

------ **Criminology**. (Refer to 45.0401)

------ **Demography and Population Studies**. (Refer to 45.0501)

45.12 **Urban Studies/Affairs**. (See 45.1201).

45.1201 **Urban Studies/Affairs.** An instructional program that describes the application of social science principles to the study of urban institutions and the forces is influencing urban social and political life. Includes instruction in urban theory, the development and evolution of urban areas, urban sociology, principles of urban and social planning, and the politics and economics of urban government and services.

------ **City/Urban, Community and Regional Planning**. (Refer to 04.0301)

45.99 **Social Science and History, Other.** (See 45.9999)

45.9999 **Social Sciences and History, Other.** Any instructional program in social sciences not described above.

46. **CONSTRUCTION TRADES**. A summary of groups of instructional programs that prepare individuals to apply technical knowledge and skills in the building, inspecting, and maintaining of structures and related properties.

46.01 **Masons and Tile Setters**. (See 46.0101)

46.0101 **Mason and Tile Setter**. An instructional program that prepares individuals to apply technical knowledge and skills in the laying and/or setting of brick, concrete block, hard tile, marble and related materials, using trowels, levels, hammers, chisels, and other hand tools.

46.02 **Carpenters**. (See 46.0201).

46.0201 **Carpenter**. An instructional program that prepares individuals to apply technical knowledge and skills to lay out, fabricate, erect, install, and repair wooden structures and fixtures, using hand and power tools. Includes instruction in areas such as common systems of framing, construction materials, estimating, blueprint reading and finish carpentry techniques.

46.03 **Electrical and Power Transmission Installers.** (See 46.0301)

46.0301 **Electrical and Power Transmission Installer, General.** An instructional program that prepares individuals to apply technical knowledge and skills to install, operate, maintain, and repair residential, commercial, and industrial electrical systems, and the power lines that transmit electricity from its source of generation to its place of consumption.

46.0302 **Electrician.** An instructional program that prepares individuals to apply technical knowledge and skills to install, operate, maintain, and repair electric apparatus and systems such as residential, commercial, and industrial electric-power wiring; and DC and AC motors, controls, and electrical distribution panels. Includes instruction in the use of test equipment.

46.0303 **Lineworker.** An instructional program that prepares individuals to apply technical knowledge and skills to install, operate, maintain and repair local, long-distance, and rural electric power cables and communication lines; erect and construct pole and tower lines; and install underground lines and cables.

46.0399 **Electrical and Power Transmission Installers, Other.** Any instructional program in electrical and power transmission installation not described above.

46.04 **Construction and Building ~~Finishers~~ *Trades* and Management.** A group of instructional programs that prepare individuals to apply technical knowledge and skills to the finishing, inspection, and maintenance of structures and related properties.

46.0401 **Building/Property Maintenance and Manager.** An instructional program that prepares individuals to apply technical knowledge and skills in order to keep a building functioning, and to service a variety of types of structures including commercial and industrial buildings and mobile homes. Includes instruction in the basic maintenance and repair skills required to service building air conditioning, heating, plumbing, electrical, major appliances and other mechanical systems.

46.0402 Concrete Placing and Finishing. An instructional program that prepares individuals to apply technical knowledge and skills in order to prepare, pour, and finish concrete structures (Restored).

46.0403 **Construction/Building Inspector.** An instructional program that prepares individuals to apply technical knowledge and skills to inspect and oversee construction of buildings, dams, highways, and other structures, in order to ensure that procedures and materials comply with plans, specifications, codes and regulations.

------ **Construction/Building Technology/Technician.** (Refer to 15.1001)

46.0404 Drywall Installer/Drywaller. An instructional program that prepares individuals to apply technical knowledge and skills to install, tape and plaster drywall installations in interior and exterior construction jobs. (Restored)

46.0406 Glazier. An instructional program that prepares individuals to apply technical knowledge and skills to install glass, fixtures, sheet and skylights. (Restored)

46.0408 **Painter and Wall Coverer.** An instructional program that prepares individuals to apply technical knowledge and skills to finish exterior and interior surfaces by applying protective or decorative coating materials, such as paint, lacquer, and wallpaper. Includes instruction in surface preparation; selecting, preparing, and applying paints and other coatings; hanging wallpaper; and equipment operation and maintenance.

46.0410 Roofer. An instructional program that prepares individuals to apply technical knowledge and skills to finish exterior roofing materials to ensure protection against the elements. (Restored)

46.0411 Well Driller. An instructional program that prepares individuals to apply technical knowledge and skills to set up, maintain, repair, and operate well drilling equipment; locate, drill, construct, and develop water, gas, and oil wells; and test and monitor wells to ensure adequate flow. Includes applications to home, business, and industrial uses.

46.0412 Blaster. An instructional program that prepares individuals to apply technical knowledge is skills to use a variety of explosive materials to aid in the construction process. Includes instruction in safety procedures for storing, handling, placement, charge power determination, drilling, pounding building demolition preparing rocky surfaces for build foundations and demolition of explosives.

46.0499 **Construction and Building ~~Finishers~~ *Trades* and Management, Other**. Any instructional program in construction and building finishing and management not described above.

46.05 **Plumbers, Pipefitters *and Steamfitters***. (See 46.0501)

46.0501 **Plumber, Pipefitter *and Steamfitter***. An instructional program that prepares individuals to practice as licensed plumbers and/or fitters by applying technical knowledge and skills to lay out, assemble, install, and maintain piping fixtures and piping systems for steam, natural gas, oil, hot water, heating, cooling, drainage, lubricating, sprinkling, and industrial processing systems in home and business environments. Includes instruction in material selection and use of tools to cut, bend, join, and weld pipes.

46.99 **Construction Trades, Other.** (See 46.9999)

46.9999 **Construction Trades, Other.** Any instructional program in construction trades not described above.

47. **MECHANICS AND REPAIRERS**. A summary of groups of instructional programs that prepare individuals to apply technical knowledge and skills in the adjustment, maintenance, part replacement, and repair of tools, equipment, and machines.

47.01 **Electrical and Electronics Equipment Installers and Repairers**. (See 47.0101)

47.0101 **Electrical and Electronics Equipment Installer and Repairer, General**. An instructional program that generally prepares individuals to apply technical knowledge and skills to operate, maintain, and repair electrical and electronic equipment. Includes instruction in electrical circuitry, simple gearing, linkages and lubrication of machines and appliances, and the use of testing equipment.

47.0102 **Business Machine Repairer**. An instructional program that prepares individuals to apply technical knowledge and skills to maintain and repair a wide variety of office machines such as electric typewriters, word processing and dictation machines, calculators, data-processing equipment, duplicating machines, and mailing machines. Includes instruction in diagnostic techniques, the use of testing equipment and the principles of mechanics, electricity, and electronics as they relate to the repair of business machines.

47.0103 **Communications Systems Installer and Repairer**. An instructional program that prepares individuals to apply technical knowledge and skills to assemble, install, operate, maintain, and repair one- and two- way communications equipment and systems, including television cable systems and mobile or stationary communication devices. Includes instruction in diagnostic techniques, the use of testing equipment and the principles of mechanics, electricity, and electronics as they relate to the repair of communications systems.

47.0104 **Computer Installer and Repairer.** An instructional program that prepares individuals to apply technical knowledge and skills to assemble, install, operate, maintain, and repair computers and related instruments. Includes instruction in power supplies, number systems, memory structure, buffers and registers, microprocessor design, peripheral equipment, programming, and networking.

------ **Computer Maintenance Technology/Technician**. (Refer to 15.0402)

47.0105 **Industrial Electronics Installers and Repairer**. An instructional program that prepares individuals to apply technical knowledge and skills to assemble, install, operate, maintain, and repair electrical/electronic equipment used in industry and manufacturing. Includes instruction in installing, maintaining and testing various types of equipment.

47.0106 **Major Appliance Installer and Repairer.** An instructional program that prepares individuals to apply technical knowledge and skills to repair, install, and service major gas, electric, and microwave consumer appliances such as stoves, refrigerators, dryers, water heaters, washers, dishwashers, and commercial units such as ice makers and coffee makers.

47.0110 Security System Installer and Repairer. An instructional program that prepares individuals to apply technical knowledge and skills to install and repair household, business, and industrial security alarms, sensors, video and sound recording devices, identification systems, protective barriers, and related technologies.

47.0199 **Electrical and Electronics Equipment Installers and Repairers, Other.** Any instructional program in electrical and electronics equipment installation and repair not described above.

47.02 **Heating, Air Conditioning, and Refrigeration Mechanics and Repairers**. (See 47.0201)

47.0201 **Heating, Air Conditioning, and Refrigeration Mechanic and Repairer**. An instructional program that prepares individuals to apply technical knowledge and skills to repair, install, service and maintain the operating condition of heating, air conditioning, and refrigeration systems. Includes instruction in diagnostic techniques, the use of testing equipment and the principles of mechanics, electricity, and electronics as they relate to the repair of heating, air conditioning and refrigeration systems.

------ **Heating, Air Conditioning and Refrigeration Technology/Technician**. (Refer to 15.0501)

47.03 **Industrial Equipment Maintenance and Repairers**. (See 47.0302 and 47.0399)

47.0302 **Heavy Equipment Maintenance and Repairer.** An instructional program that prepares individuals to apply technical knowledge and skills in the field maintenance and repair of heavy equipment, and in the general maintenance and overhaul of such equipment. Includes instruction in inspection, maintenance, and repair of tracks, wheels, brakes, operating controls, pneumatic and hydraulic systems, electrical circuitry, engines and in techniques of welding and brazing.

47.0303 **Industrial Machinery Maintenance and Repairer.** An instructional program that prepares individuals to apply technical knowledge and skills to repair and maintain industrial machinery and equipment such as cranes, pumps, engines and motors, pneumatic tools, conveyor systems, production machinery, marine deck machinery, and steam propulsion, refinery, and pipeline-distribution systems.

47.0399 **Industrial Equipment Maintenance and Repairers, Other.** Any instructional program in industrial equipment maintenance and repair not described above.

47.04 **Miscellaneous Mechanics and Repairers**. A group of instructional programs that prepare individuals to apply technical knowledge and skills to repair and maintain a wide variety of items other than those described elsewhere in the Mechanics and Repairers Series.

47.0401 **Instrument Calibration and Repairer**. An instructional program that prepares individuals to apply technical knowledge and skills to repair and maintain testing equipment, calibration equipment, instrumentation, meters, measuring devices, and control devices.

------ **Instrumentation Technology/Technician**. (Refer to 15.0404)

47.0402 **Gunsmith**. An instructional program that prepares individuals to apply technical knowledge and skills to make, repair, maintain, and modify firearms according to blueprints or customer specifications, using specialized hand tools and machines.

47.0403 **Locksmith and Safe Repairer**. An instructional program that prepares individuals to apply technical knowledge and skills to make, repair, maintain, modify, and open locks; to make keys; to enter and change lock and safe combinations; and install and repair safes.

47.0404 **Musical Instrument Repairer.** An instructional program that prepares individuals to apply technical knowledge and skills to make, repair, maintain, and tune acoustic and electric musical instruments. Includes instruction in methods and equipment for making musical instruments, electronic instrument amplification systems, techniques of cleaning, and methods of tuning musical instruments.

47.0408 **Watch, Clock and Jewelry Repairer.** An instructional program that prepares individuals to apply technical knowledge and skills to make repairs, and maintain timepieces, time-measuring devices, and jewelry items. Includes instruction in mechanical timekeeping systems, digital timekeeping systems, timesetting, casting, engraving, polishing, stonesetting, soldering, fine microscopic work, equipment and tool maintenance, redesign and restyling techniques, and customer relations.

47.0409 Parts and Warehousing Operations and Maintenance Technology/Technician. An instructional program that prepares individuals to apply technical knowledge and skills to maintain inventory control, care for inventory, and make minor repairs to warehouse equipment.

47.0499 **Miscellaneous Mechanics and Repairers, Other.** Any instructional program in miscellaneous mechanics and repairers not described above.

47.05 **Stationary Energy Sources Installers and Operators.** (See 47.0501)

47.0501 **Stationary Energy Sources Installer and Operator.** An instructional program that prepares individuals to apply technical knowledge and skills to install, repair, operate, and maintain large power sources for such purposes as generating electricity, pumping, and heating.

47.06 **Vehicle and Mobile Equipment Mechanics and Repairers.** A group of instructional programs that prepare individuals to apply technical knowledge and skills to maintain and repair aircraft, land vehicles, ships, construction equipment and portable power equipment.

47.0603 **Auto/Automotive Body Repairer.** An instructional program that prepares individuals to apply technical knowledge and skills to repair, reconstruct and finish automobile bodies, fenders, and external features. Includes instruction in all phases of bodywork preparation and finishing.

47.0604 **Auto/Automotive Mechanic/Technician.** An instructional program that prepares individuals to apply technical knowledge and skills to repair, service, and maintain all types of automobiles, trucks, vans and buses. Includes instruction in the diagnosis of malfunctions in and repair of engines; fuel, electrical, cooling, and brake systems; and drive train and suspension systems.

------ **Automotive Engineering Technology/Technician.** (Refer to 15.0803)

47.0605 **Diesel Engine Mechanic and Repairer**. An instructional program that prepares individuals to apply technical knowledge and skills to repair, service, and maintain diesel engines in vehicles such as automobiles, buses, ships, trucks, railroad locomotives, and construction equipment; as well as stationary diesel engines in electrical generators and related equipment.

------ **Agricultural Power Machinery Operator**. (Refer to 01.0204)

47.0606 **Small Engine Mechanic and Repairer.** An instructional program that prepares individuals to apply technical knowledge and skills to repair, service, and maintain small internal-combustion engines used on portable power equipment such as lawnmowers, chain saws, rotary tillers, and snowmobiles.

47.0607 **Aircraft Mechanic/Technician Airframe.** An instructional program that prepares individuals to apply technical knowledge and skills to repair, service, and maintain all aircraft components other than engines, propellers, avionics, and instruments. Includes instruction in layout and fabrication of sheet metal, fabric, wood, and other materials into structural members, parts, and fittings, and replacement of damaged or worn parts such as control cables and hydraulic units.

47.0608 **Aircraft Mechanic/Technician Powerplant**. An instructional program that prepares individuals to apply technical knowledge and skills to repair, service, and maintain all types of aircraft powerplant and related systems. Instruction includes engine inspection and maintenance, lubrication and cooling, electrical and ignition systems, carburetion, fuels and fuel systems, propeller and fan assemblies.

47.0609 **Aviation Systems and Avionics Maintenance *Technology*/Technician**. An instructional program that prepares individuals to apply technical knowledge and skills to repair, service, and maintain all types of aircraft operating, control, and electronic systems. Includes instruction in flight instrumentation, aircraft communications and homing systems, radar and other sensory systems, navigation aids, and specialized systems for various types of civilian and military aircraft.

------ **Aeronautical and Aerospace Engineering Technology/Technician**. (Refer to 15.0801)

47.0610 **Bicycle Mechanic and Repairer**. An instructional program that prepares individuals to apply technical knowledge and skills to repair, service, and maintain bicycles and other human-powered vehicles. Includes instruction in lubrication, adjustments of moving parts, and wheel building.

47.0611 **Motorcycle Mechanic and Repairer**. An instructional program that prepares individuals to apply technical knowledge and skills to repair, service, and maintain motorcycles and other similar powered vehicles. Includes instruction in lubrication and cooling systems, electrical and ignition systems, carburetion, fuel systems and adjustments of moving parts.

47.0612 Vehicle Emissions Inspection and Maintenance Technology/Technician. An instructional program that prepares individuals to apply technical knowledge and skills to test, repair, service, and maintain vehicle emission systems in accordance with relevant laws and regulations.

47.0699 **Vehicle and Mobile Equipment Mechanics and Repairers, Other.** Any instructional program in vehicle and mobile equipment mechanics and repairers not described above.

47.99 **Mechanics and Repairers, Other**. (See 47.9999)

47.9999 **Mechanics and Repairers, Other**. Any instructional program in mechanics and repairs not described above.

48. **PRECISION PRODUCTION TRADES.** A summary of groups of instructional programs that prepare individuals to apply technical knowledge and skills to create products using techniques of precision craftsmanship or technical illustration.

48.01 **Drafting.** (See 48.0101)

48.0101 **Drafting, General**. An instructional program that generally prepares individuals to apply technical knowledge and skills to plan and prepare scale pictorial interpretations of engineering and design concepts. Includes instruction in the use of precision drawing instruments, computer-assisted design programs, sketching and illustration, and specification interpretation.

48.0102 **Architectural Drafting.** An instructional program that prepares individuals to apply technical knowledge and skills to plan and prepare scale pictorial interpretations of plans and design concepts for buildings or other structures. Includes instruction in creating layouts and designs, architectural blueprints and renderings and in the use of computer-assisted design programs.

48.0103 **Civil/Structural Drafting.** An instructional program that prepares individuals to apply technical knowledge and skills to plan and prepare scale pictorial interpretations of plans and design concepts for construction projects, including topographical profiles, related maps and specifications sheets for use by civil engineers and other land use planning specialists. Includes instruction in performing all stages of design illustration and interpretation from initial concept to prototype, and the use of computer-assisted design programs.

48.0104 **Electrical/Electronics Drafting**. An instructional program that prepares individuals to apply technical knowledge and skills to plan and prepare scale pictorial interpretations of plans and design concepts for wiring diagrams and schematics used by electrical/electronics engineers, electrical contractors and repairers to plan, install and modify electrical equipment and systems. Includes instruction in performing all stages of design illustration and interpretation from initial concept to prototype, and the use of computer-assisted design programs.

48.0105 **Mechanical Drafting.** An instructional program that prepares individuals to apply technical knowledge and skills to plan and prepare scale pictorial interpretations of plans and design concepts for mechanical devices and machinery, including vehicles and other major systems. Includes instruction in performing all stages of design illustration and interpretation from initial concept to prototype, and the use of computer-assisted design programs.

48.0199 **Drafting, Other.** Any instructional program in drafting not described above.

48.02 **Graphic and Printing Equipment Operators**. (See 48.0201)

48.0201 **Graphic and Printing Equipment Operator, General.** An instructional program that generally prepares individuals to apply technical knowledge and skills to plan, prepare and execute commercial and industrial visual image and print products using mechanical, electronic, and digital graphic and printing equipment.

------ **Graphic Design, Commercial Art and Illustration.** (Refer to 50.0402)

------ **Commercial Photography.** (Refer to 50.0406)

------ **Photographic Technology/Technician.** (Refer to 10.0103)

~~48.0205 **[Mechanical Typesetter and Composer]**. An instructional program that prepares individuals to apply technical knowledge and skills to lay out, compose, and make up typesetting and typecast, by hand and by machine~~. (Deleted, included under 48.0299)

48.0206 **Lithographer and Platemaker.** An instructional program that prepares individuals to apply technical knowledge and skills to make prints from chemically prepared stone or metal plane surfaces. Includes instruction in platemaking, stripping, lithographic photography, and related processes.

48.0208 **Printing Press Operator.** An instructional program that prepares individuals to apply technical knowledge and skills to make ready, operate, and maintain printing presses.

48.0211 **Computer Typography and Composition Equipment Operator**. An instructional program that prepares individuals to apply technical knowledge and skills to design and execute page formats, layouts and text composition, and to make typographical selections using computer graphics and other computer-assisted design programs.

48.0212 **Desktop Publishing *and Web Page Design Specialist*.** An instructional program that prepares individuals to apply technical knowledge and skills to plan and execute electronic publications and Internet home pages using desktop publishing equipment and editing software.

48.0299 **Graphic and Printing Equipment Operators, Other.** Any instructional program in graphic and printing equipment operation not described above.

48.03 **Leatherworkers and Upholsterers.** A group of instructional programs that prepare individuals to apply technical knowledge and skills to fabricate and repair all types of upholstery and leather goods.

48.0303 **Upholsterers**. An instructional program that prepares individuals to apply technical knowledge and skills to install springs, filling, padding, covering and finishing on items such as furniture, automobile seats, caskets, mattresses, and bedsprings.

48.0304 **Shoe, Boot and Leather Repairer.** An instructional program that prepares individuals to apply technical knowledge and skills to repair all types of footwear, including replacement and mending of worn parts; repairing orthopedic footwear, refinishing and dyeing leather; and repairing other leather goods such as handbags, belts, and luggage.

48.0399 **Leatherworkers and Upholsterers, Other.** Any instructional program in leatherworking and upholstering not described above.

48.05 **Precision Metal Workers.** (See 48.0501 - 48.0599)

48.0501 **Machinist/~~Machine Technologist~~.** An instructional program that prepares individuals to apply technical knowledge and skills to plan, manufacture, assemble, test, and repair parts, mechanisms, machines, and structures in which materials are cast, formed, shaped, molded, heat treated, cut, twisted, pressed, fused, stamped or worked.

48.0503 **Machine Shop Assistant.** An instructional program that prepares individuals to apply technical knowledge and skills to fabricate and modify metal parts in support of other manufacturing, repair or design activities, or as an independent business.

48.0506 **Sheet Metal Worker.** An instructional program that prepares individuals to apply technical knowledge and skills to form, shape, bend and fold extruded metals, including the creation of new products, using hand tools and machines such as cornice brakes, forming rolls, and squaring shears.

48.0507 **Tool and Die Maker/~~Technologist~~.** An instructional program that prepares individuals to apply technical knowledge and skills to operate machine tools used in the forming of metal components, as well as the fabrication of special tools, dies, jigs and fixtures used in cutting, working and finishing metal components.

48.0508 **Welder/~~Welding Technologist~~.** An instructional program that prepares individuals to apply technical knowledge and skills to unite or separate metal parts by heating, using techniques and equipment, such as brazing, arc, gas and lasers.

48.0509 Ironworker, Foundry Worker and Blacksmith (Foundry Worker Restored from 48.0502) (Definition to be developed – suggestions welcome)

48.0599 **Precision Metal Workers, Other.** Any instructional program in precision metal work not described above.

48.06 Precision Work, Assorted Materials. A group of instructional programs that prepare individuals to apply technical knowledge and skills to lay out, shape, assemble, finish and repair articles made of assorted materials.

48.0605 Millwright. (Definition to be developed – suggestions welcome)

48.0606 Boilermaker (Definition to be developed – suggestions welcome)

48.0699 Precision Work, Assorted Materials, Other. Any instructional program in precision metal work not described above.

48.07 **Woodworkers**. A group of instructional programs that prepare individuals to apply technical knowledge and skills to lay out, shape, assemble, finish and repair articles made of wood.

48.0701 **Woodworker, General.** An instructional program that prepares individuals to apply technical knowledge and skills to lay out and shape stock; assemble wooden articles or subassemblies; mark, bind, saw, carve, and sand wooden products; repair wooden articles, and use a variety of hand and power tools.

48.0702 **Furniture Designer and Maker.** An instructional program that prepares individuals to apply technical knowledge and skills to prepare and execute furniture design projects; assemble and finish furniture articles or subassemblies; repair furniture; and use a variety of hand and power tools.

48.0703 **Cabinetmaker and Millworker.** An instructional program that prepares individuals to apply technical knowledge and skills to set up, operate and repair industrial woodworking machinery, and to use such machinery to design and fabricate wooden components and complete articles.

48.0799 **Woodworkers, Other.** Any instructional program in woodworking not described above.

48.99 **Precision Production Trades, Other.** (See 48.9999)

48.9999 **Precision Production Trades, Other.** Any instructional programs in precision production not described above.

49. **TRANSPORTATION AND MATERIALS MOVING WORKERS.** A summary of groups of instructional programs that prepare individuals to apply technical knowledge and skills to perform tasks and services that facilitate the movement of people or materials.

49.01 **Air Transportation Workers.** A group of instructional programs that prepare individuals to apply technical knowledge and skills to provide in-flight, ground and administrative services to the aviation industry.

49.0101 **Aviation and Airway Science.** An instructional program that generally describes the study of aviation and the aviation industry, including in-flight and ground support operations. Includes instruction in the technical, business, and general aspects of air transportation systems.

49.0102 Aircraft Pilot and Navigator, Fixed Wing. An instructional program that prepares individuals to apply technical knowledge and skills to the flying and/or navigation of commercial passenger and cargo, agricultural, public service, corporate and rescue fixed wing aircraft. Includes instruction in principles of aircraft design and performance; aircraft flight systems and controls; flight crew operations and procedures; radio communications and navigation procedures and systems; airways safety and traffic regulations; and governmental rules and regulations pertaining to piloting aircraft. Programs may qualify individuals to sit for the FAA commercial aircrew examinations. (Rotary Wing Moved to 49.0108)

49.0104 **Aviation Management.** An instructional program that prepares individuals to apply technical knowledge and skills to the management of aviation industry operations and services. Includes instruction in airport operations, ground support and flightline operations, passenger and cargo operations, flight safety and security operations, aviation industry regulation, and related business aspects of managing aviation enterprises.

49.0105 **Air Traffic Controller.** An instructional program that prepares individuals to apply technical knowledge and skills to air-traffic management and control, usually with additional training at the FAA Flight Control Center in a cooperative education program. Includes instruction in flight control; the use of radar and electronic scanning devices; plotting of flights; radio communication; interpretation of weather conditions affecting flights; flight instrumentation used by pilots; and maintenance of flight-control center or control-tower log books.

49.0106 **Flight Attendant**. An instructional program that prepares individuals to apply technical knowledge and skills to the performance of a variety of personal services conducive to the safety and comfort of airline passengers during flight, including verifying tickets, explaining the use of safety equipment, providing passenger services, and responding to in-flight emergencies.

~~49.0107 [**Aircraft Pilot (Private)**]. An instructional program that prepares individuals to fly aircraft for personal use, and qualifies individuals to sit for the FAA pilot's license examination. Includes instruction in principles of aircraft design and performance; aircraft flight systems and controls; flight crew operations and procedures; radio communications and navigation procedures and systems; airways safety and traffic regulations; and governmental rules and regulations pertaining to piloting aircraft.~~ (Moved to CHAPTER V, 36.0119)

49.0108 Aircraft Pilot and Navigator, Rotary Wing. An instructional program that prepares individuals to apply technical knowledge and skills to the flying and/or navigation commercial passenger and cargo, agricultural, public service, corporate and rescue rotary winged aircraft. Includes instruction in principles of aircraft design and performance; aircraft flight systems and controls; flight crew operations and procedures; radio communications and navigation procedures and systems; airways safety and traffic regulations; and governmental rules and regulations pertaining to piloting aircraft. Programs may qualify individuals to sit for the FAA commercial aircrew examinations.

49.0109 Flight Instructor, Fixed Wing. An instructional program that prepares individuals to apply technical knowledge and skills to the training pilot or navigators to fly and/or navigate commercial passenger and cargo, agricultural, public service, corporate and rescue fixed wing aircraft. Includes instruction in principles of aircraft design and performance; aircraft flight systems and controls; flight crew operations and procedures; radio communications and navigation procedures and systems; airways safety and traffic regulations; and governmental rules and regulations pertaining to piloting aircraft. Programs may qualify individuals to administer for the FAA commercial aircrew examinations

49.0110 Flight Instructor, Rotary Wing. An instructional program that prepares individuals to apply technical knowledge and skills to the training pilot or navigators to fly and/or navigate commercial passenger and cargo, agricultural, public service, corporate and rescue fixed wing aircraft. Includes instruction in principles of aircraft design and performance; aircraft flight systems and controls; flight crew operations and procedures; radio communications and navigation procedures and systems; airways safety and traffic regulations; and governmental rules and regulations pertaining to piloting aircraft. Programs may qualify individuals to administer for the FAA commercial aircrew examinations

49.0111 ***Specialist Pilot Ratings (e.g. Multi-Engine, Float, and IFR). An instructional program that prepares individuals to apply technical knowledge and skills to the piloting or navigating to fly and/or navigate commercial passenger and cargo, agricultural, public service, corporate and rescue fixed and rotary winged aircraft. Includes instruction in principles of aircraft design and performance; aircraft flight systems and controls; flight crew operations and procedures; radio communications and navigation procedures and systems; airways safety and traffic regulations; and governmental rules and regulations pertaining to piloting specialized aircraft. Programs may qualify individuals to sit for the FAA commercial aircrew examinations***

49.0199 **Air Transportation Workers, Other.** Any instructional program in aviation and air transportation services not described above.

49.02 **Vehicle and Equipment Operators.** A group of instructional programs that prepare individuals to apply technical knowledge and skills to operate commercial and construction vehicles and mobile equipment.

49.0202 **Construction Equipment Operator**. An instructional program that prepares individuals to apply technical knowledge and skills to operate and maintain a variety of heavy equipment, such as a crawler tractors, motor graders and scrapers, and shovels, including dragline, hoe, and cranes. Includes instruction in digging, ditching, sloping, stripping, grading, and backfiling, clearing and excavating.

------ **Agricultural Power Machinery Operator.** (Refer to 01.0204)

49.0205 **Truck, Bus and Other Commercial Vehicle Operator**. An instructional program that prepares individuals to apply technical knowledge and skills to drive trucks and buses, delivery vehicles, for-hire vehicles and other commercial vehicles. Includes instruction in operating gas, diesel, or electrically-powered vehicles; loading and unloading cargo or passengers; reporting delays or accidents on the road; verifying load against shipping papers; arranging transportation for personnel; and keeping records of receipts and fares.

49.0299 **Vehicle and Equipment Operators, Other.** Any instructional program in vehicle and equipment operation not described above.

49.03 **Water Transportation Workers.** A group of instructional programs that prepare individuals to apply technical knowledge and skills to perform tasks on or in the water, including diving, fishing, and ship operation and repair services.

49.0303 **~~Fishing Technology~~/Commercial Fishing**. An instructional program that prepares individuals to apply technical knowledge and skills to function as commercial fishermen, fishing operations supervisors or in related fishing industry operations. Includes instruction in fishing vessel operation; fishing equipment operation and maintenance; equipment repair; catch identification, sorting, and storage; safety procedures; record keeping; and applicable legal regulations.

49.0304 **Diver, Professional *and Instructor***. An instructional program that prepares individuals to apply technical knowledge and skills to function as professional deep-water or scuba divers, diving instructors, or diving support personnel. Includes instruction in the use of diving equipment and related specialized gear; diving safety procedures; operation and maintenance of underwater life-support systems; underwater communication systems; decompression systems; underwater salvage; exploration, rescue, and photography; and installation and fitting of underwater mechanical systems and their maintenance, repair or demolition.

49.0306 **Marine Maintenance/*Fitter* and Ship Repairer**. An instructional program that prepares individuals to apply technical knowledge and skills to repair outboard and inboard engines; test, maintain, and repair steering devices and electrical systems; repair metal, wood, and fiberglass hulls and vessel components; fabricate and maintain sails; and repair and balance propellers and drive shafts.

49.0309 **Marine Science/Merchant Marine Officer**. An instructional program that prepares individuals to serve as captains, executive officers, engineers and ranking mates on commercially licensed inland, coastal and ocean-going vessels. Includes instruction in maritime traditions and law; maritime policy; economics and management of commercial marine operations; basic naval architecture and engineering; shipboard power systems engineering; crew supervision; and administrative procedures.

49.0399 **Water Transportation Workers, Other.** Any instructional program in water transportation not described above.

49.99 **Transportation and Materials Moving Workers, Other**. (See 49.9999)

49.9999 **Transportation and Materials Moving Workers, Other.** Any instructional program in transportation and materials moving not described above.

50. **VISUAL AND PERFORMING ARTS**. A summary of groups of instructional programs that describe the creation and interpretation of works and performances that use auditory, kinesthetic, and visual phenomena to express ideas and emotions in various forms, subject to aesthetic criteria.

50.01 **Visual and Performing Arts.** (See 50.0101).

50.0101 **Visual and Performing Arts.** An instructional program that generally describes an undifferentiated program in the visual and performing arts, and that may prepare individuals in any of the visual artistic media or performing disciplines.

50.02 **Crafts, Folk Art and Artisanry**. (See 50.0201)

------ **Fine Arts and Art Studies**. (Refer to 50.07 Series)

50.0201 **Crafts, Folk Art and Artisanry.** An instructional program that describes the aesthetics, techniques, and creative processes for designing and fashioning objects in one or more of the handcraft or folk art traditions, and that prepares individuals to create in any of these media.

------ **Ceramics Arts and Ceramics.** (Moved to 50.0711)
------ **Fiber, Textiles and Weaving Arts.** (Moved to 50.0712)

------ **Metal and Jewelry Arts.** (Moved to 50.0713)

50.03 **Dance**. (See 50.0301).

50.0301 **Dance**. An instructional program that prepares individuals to express ideas, feelings, and/or inner visions through the performance of one or more of the dance disciplines, including but not limited to ballet, modern, jazz, ethnic, and folk dance, and that describes the study and analysis of dance as a cultural phenomenon. Includes instruction in choreography, labanotation, dance history and criticism, and dance production.

------ **Drama/Theatre Arts and Stagecraft.** (Refer to 50.05 Series)

------ **Music.** (Refer to 50.09 Series)

------ **Drama and Dance Teacher Education**. (Refer to 13.1324)

------ **Dance Therapy.** (Refer to 51.2302)

50.04 **Design and Applied Arts.** A group of instructional programs in design, illustration and photography and Other Graphic Art. (See 50.0401-50.0499)

------ **Fine Arts and Art Studies.** (Refer to 50.07 Series)

50.0401 **Design and Visual Communications**. An instructional program in the applied visual arts that describes the general principles and techniques for effectively communicating ideas and information, and packaging products, in digital and other formats to business and consumer audiences, and that may prepare individuals in any of the applied art media.

50.0402 **Graphic Design, Commercial Art and Illustration.** An instructional program in the applied visual arts that prepares individuals to use artistic techniques to effectively communicate ideas and information to business and consumer audiences via illustrations and other forms of digital or printed media. Includes instruction in concept design, layout, paste-up, and techniques such as engraving, etching, silkscreen, lithography, offset, drawing and cartooning, painting, collage, and computer graphics.

------ **Medical Illustrating**. (Refer to 51.2703)

50.0404 **Industrial Design.** An instructional program in the applied visual arts that prepares individuals to use artistic techniques to effectively communicate ideas and information to business and consumer audiences via the creation of effective forms, shapes, and packaging for manufactured products. Includes instruction in designing in a wide variety of plastic and digital media, prototype construction, design development and refinement, principles of cost saving, and product structure and performance criteria relevant to aesthetic design parameters.

50.0406 **Commercial Photography.** An instructional program in the applied visual arts that prepares individuals to use artistic techniques to effectively communicate ideas and information to business and consumer audiences, and recording events and people, via digital, film, still and video photography. Includes instruction in specialized camera and equipment operation and maintenance, applications to commercial and industrial needs, and photography business operations.

------ **Film/Video and Photographic Arts.** (Refer to 50.06 Series)

50.0407 **Fashion Design and Illustration.** An instructional program in the applied visual arts that prepares individuals to apply artistic principles and techniques to the professional design of commercial fashions, apparel, and accessories; the illustration of fashion concepts; and the management of fashion development projects. Includes instruction in apparel design; accessory design; the design of men's', women's', and children's' wear; flat pattern design; computer-assisted design and manufacturing; concept planning; designing in specific materials; labor and cost analysis; history of fashion; fabric art and printing; and the principles of management and operations in the fashion industry.

50.0408 **Interior Design.** An instructional program in the applied visual arts that prepares individuals to apply artistic principles and techniques to the professional planning, designing, equipping, and furnishing residential and commercial interior spaces. Includes instruction in computer applications drafting and graphic techniques; principles of interior lighting, acoustics, systems integration, and color coordination; furniture and furnishings; textiles and their finishing; the history of interior design and period styles; basic structural design; building codes and inspection regulations; and applications to office, hotel, factory, restaurant and housing design.

------ **Interior Architecture.** (Refer to 04.0501)

------ **Interior Environments**. (Refer to 19.0603)

50.0499 **Design and Applied Arts, Other**. Any instructional program in design and applied arts not described above.

50.05 **Drama/Theatre Arts and Stagecraft**. A group of instructional programs that describe the study of drama and the theatre, and the professional production and performance of dramatic works.

------ **Foreign Languages and Literatures.** (Refer to 16. Series)

------ **English Language and Literature/Letters.** (Refer to 23. Series)

50.0501 **Drama/Theatre Arts, General.** An instructional program that generally describes the study of dramatic works and their performance. Includes instruction in major works of dramatic literature, dramatic styles and types, and the principles of organizing and producing full live or filmed productions.

50.502 **Technical Theatre/Theatre Design and Stagecraft.** An instructional program that prepares individuals to apply artistic, technical and dramatic principles and techniques to the communication of dramatic information, ideas, moods, and feelings through technical theatre methods. Includes instruction in set design, lighting design, sound effects, theatre acoustics, scene painting, property management, costume design, and technical direction and production and use of computer applications to support these functions above.

------ **Make-up Artist**. (Refer to 12.0406)

50.0503 **Acting and Directing**. An instructional program that prepares individuals to communicate dramatic information, ideas, moods, and feelings through the achievement of naturalistic and believable behavior in imaginary circumstances; and to supervise dramatic performance. Includes instruction in voice and acting speech, stage dialects, movement, improvisation, acting styles, theatre history, rehearsal management, scene work, directing concepts, script interpretation, and actor coaching.

------ **Speech and Rhetorical Studies**. (Refer to 23.1001)

50.0504 **Playwriting and Screenwriting**. An instructional program that describes the principles and techniques for communicating dramatic information, ideas, moods, and feelings through the composition of creative written works for the theatre and/or film. Includes instruction in creative writing craft, scene writing, script development, stage and/or camera instructions, line and moment analysis, script reading, script editing, and the creation of full productions

------ **English Creative Writing**. (Refer to 23.0501)

~~50.0505 **[Drama/Theatre Literature, History and Criticism.]** An instructional program that describes the study of the history, literature, theory, and analysis of written plays, theatrical productions, and theatre methods and organization. Includes instruction in historical method; critical theory; literary analysis; the study of themes and archetypes in dramatic literature; the history of acting, directing, and technical theatre; and the study of specific historical and cultural styles and traditions~~. (Deleted, included under 50.0599)

50.0599 **Dramatic/Theatre Arts and Stagecraft, Other**. Any instructional program in dramatic/theatre arts and stagecraft not described above.

50.06 **Film/Video and Photographic Arts.** (See 50.0601-50.0699)

50.0601 **Film/Cinema Studies.** An instructional program in the visual arts that describes the study of the history, development, theory, and criticism of the film/video arts, as well as the basic principles of film making and film production.

50.0602 **Film-Video Making/Cinematography and Production**. An instructional program that prepares individuals to communicate dramatic information, ideas, moods, and feelings through the making and producing of films and videos. Includes instruction in theory of film; film technology and equipment operation; film production; film directing; film editing; cinematographic art; film audio; techniques for making specific types of films and/or videos; the , use of computer applications to record or enhance images, audio or effect and the planning and management of film/video operations.

50.0605 **Photography**. An instructional program that describes the principles and techniques of communicating information, ideas, moods, and feelings through the creation of images on photographic film, plates, digital images and that may prepare individuals to be professional photographic artists. Includes instruction in camera and equipment operation and maintenance, film and plate developing, light and composition, films and printing media, color and special effects, photographic art, photographic history, use of computer applications to record or enhance images and applications to the photography of various subjects.

------ **Photographic Technology/Technician**. (Refer to 10.0103)

------ **Commercial Photography**. (Refer to 50.0406)

50.0607 Animation, Video, Graphics and Special Effects (Definition to be developed - suggestions welcome)

50.0699 **Film/Video and Photographic Arts, Other.** Any instructional program in film/video and photographic arts not described above.

50.07 **Fine Arts and Art Studies.** A group of instructional programs that prepare individuals as professional studio artists and arts managers and that describe the study of art.

------ **Crafts, Folk Art and Artisanry.** (Refer to 50.0201)

------ **Design and Commercial Arts.** (Refer to 50.04 Series)

50.0701 **Art, General.** An instructional program that generally describes art, including its development and practice. Includes instruction in art appreciation, a basic knowledge of art history, fundamental principles of design and color, and an introduction to various media and studio techniques.

------ **Art Teacher Education**. (Refer to 13.1302)

------ **Art Therapy.** (Refer to 51.2301)

50.0702 **Fine/Studio Arts**. An instructional program that prepares individuals to function as creative artists in the visual and plastic media. Includes instruction in the traditional fine arts media (drawing, painting, sculpture, printmaking, CAD/CAM) and/or modern media (ceramics, textiles, intermedia, photography, digital images); theory of art; color theory; composition and perspective; anatomy; the techniques and procedures for maintaining equipment and managing a studio; and art portfolio marketing.

------ **Photography.** (Refer to 50.0605)

50.0703 **Art History, Criticism and Conservation.** An instructional program that describes the study of the historical development of art as social and intellectual phenomenon, the analysis of works of art, and art conservation. Includes instruction in the theory of art, art history research methods, connoisseurship, the preservation and conservation of works of art, and the study of specific periods, cultures, styles, and themes.

------ **Historic Preservation, Conservation and Architectural History**. (Refer to 30.1201)

------ **Museology/Museum Studies**. (Refer to 30.1401)

50.0704 **Arts Management.** An instructional program that prepares individuals to organize and manage art organizations, operations, and facilities. Includes instruction in business and financial management; marketing and fundraising; personnel management and labor relations; event promotion and management; public relations and arts advocacy; arts law; and applications to specific arts activities such as galleries, museums, studios, foundations, and community organizations.

50.0705 **Drawing.** An instructional program that prepares individuals creatively and technically to express emotions, ideas, or inner visions through representation by lines made on a surface. Includes instruction in eye-hand coordination; line, value, shape, and perspective; figure and still life drawing; the use of media such as pen and ink, pencil, charcoal, pastel, and brush; and personal style development.

50.0706 **Intermedia/Multimedia**. An instructional program that prepares individuals creatively and technically to express emotions, ideas, or inner visions in either two or three dimensions, through simultaneous use of a variety of materials and media.

50.0708 **Painting**. An instructional program that prepares individuals creatively and technically to express emotions, ideas, or inner visions by the application of paints and related chemical color substances to canvases or other materials. Includes instruction in color and color mixing; surface preparation; composition; oil and acrylic media; watercolor media; painting techniques; and personal style development.

50.0709 **Sculpture**. An instructional program that prepares individuals creatively and technically to express emotions, ideas, or inner visions by creating three-dimensional art works. Includes instruction in the analysis of form in space; round and relief concepts; sculptural composition; modern and experimental methods; different media such as clay, plaster, wood, stone, and metal; techniques such as carving, molding, welding, casting, and modeling; and personal style development.

50.0710 **Printmaking**. An instructional program that prepares individuals creatively and technically to express emotions, ideas, or inner visions by rendering art concepts onto surfaces and transferring images, via ink or dyes, onto paper or fabric. Includes instruction in monochrome and color printing; tonality; chemistry; equipment set-up and maintenance; techniques such as serigraphy, lithography, intaglio, woodcut, block, stencil, relief, etching, and composite; and personal style development.

50.0711 **Ceramic Arts and Ceramics**. An instructional program that prepares individuals creatively and technically to express emotions, ideas, or inner visions by producing art works out of clay and similar materials. Includes instruction in handbuilt and wheelthrown techniques; molding; slips and glazes; trimming and decorating; firing and kiln operation; oxidation; mixed media; ceramic murals; and personal style development.

50.0712 **Fiber, Textile and Weaving Arts**. An instructional program that prepares individuals creatively and technically to express emotions, ideas, or inner visions by constructing art works from woven or non-woven fabrics and fibrous materials. Includes instruction in weaving techniques and loom operation; non-woven techniques such as knitting, coiling, netting, and crocheting; quilting; dyeing and pigmentation; printing and other finishing techniques; pattern design; tapestry; and personal style development.

50.0713 **Metal and Jewelry Arts.** An instructional program that prepares individuals creatively and technically to express emotions, ideas, or inner visions by fashioning art works from gems, other stones, and precious metals. Includes instruction in gemology; metalsmithing and finishing; stone cutting and polishing; metal and non-metal casting and molding; electroforming; metal coloring; enameling; photo etching; lapidary technique and art; design concepts; and personal style development.

50.0799 **Fine Arts and Art Studies, Other.** Any instructional program in fine arts and art studies not described above.

50.09 **Music.** (See 50.0901)

50.0901 **Music, General.** An instructional program that generally describes the study and appreciation of music, and the study of music performance. Includes instruction in principles of harmony, musical notation, musical styles, the historical development of music, and the fundamentals of various musical instruments.

------ **Music Teacher Education.** (Refer to 13.1312)

------ **Religious/Sacred Music**. (Refer to 39.0501)

------ **Musical Instrument Repairer**. (Refer to 47.0404)

------ **Music Therapy**. (Refer to 51.2305)

50.0902 **Music History and Literature**. An instructional program that describes the study of the historical evolution of music as a social and intellectual phenomenon, the development of musical instruments and techniques, and the analysis and criticism of musical literature. Includes instruction in music history research methods, aesthetic analysis of musical compositions, history of musical writing and notation, the development of musical instruments, the development of music theory, and the study of specific periods, cultural traditions, styles, and themes.

50.0903 **Music -- General Performance**. An instructional program that generally prepares individuals to master musical instruments and performing art as solo and/or ensemble performers. Includes instruction on one or more specific instruments from various instrumental groupings.

50.0904 **Music -- Theory and Composition**. An instructional program that describes the study of the principles of sound manipulation as applied to the creation of music, and the techniques of creating and arranging music. Includes instruction in aural theory, melody, counterpoint, complex harmony, modulation, chromatics, improvisation, progressions, musical writing, instrumentation, orchestration, electronic and computer applications, studies of specific musical styles, and development of original creative ability.

50.0905 **Musicology and Ethnomusicology**. An instructional program that describes the systematic study of the forms and methods of music art, and the functions of music, in Western and non-Western societies and cultures. Includes instruction in music theory, musicological research methods, and studies of specific cultural styles such as jazz, folk music, rock, ethnic musical traditions, and the music of non-Western cultures.

50.0906 **Music -- Conducting.** An instructional program that prepares individuals to master the art of leading bands, choirs, orchestras and other ensembles in performance, and related music leadership. Includes instruction in score analysis and arranging, rehearsal and performance leadership, music coaching, arrangement and performance planning, ensemble operations management, and applications to specific school or professional ensembles.

50.0907 **Music -- Piano and Organ Performance.** An instructional program that prepares individuals to master the piano, organ, or related keyboard instruments and performing art as solo, ensemble, and/or accompanist performers. Includes instruction in piano and keyboard pedagogy, ensemble playing, accompanying, service playing, repertoire, keyboard and pedal skills, recital, and personal style development.

50.0908 **Music -- Voice and Choral/Opera Performance.** An instructional program that prepares individuals to master the human voice and performing art as solo and/or ensemble performers in concert, choir, opera, or other forms of singing. Includes instruction in voice pedagogy, diction, vocal physiology and exercise, expressive movement, repertoire, recital, and personal style development.

50.0909 **Music -- Business Management and Merchandising.** An instructional program that prepares individuals to organize and manage music organizations, operations, facilities, and personnel. Includes instruction in business and financial management; marketing and fundraising; personnel management and labor relations; event promotion and management; music products merchandising; artist agency and promotion; music law; and applications to specific activities such as managing Theatres, recording studios and companies, bands and other ensembles, individual artists, and music organizations.

50.0910 Jazz Studies. An instructional program that prepares individuals to master the performance of jazz in various types of ensembles, including improvisation theory and skills and the study of jazz theory and history.

50.0911 Music — Stringed Instrument Performance. An instructional program that prepares individual to master a stringed instrument and performing arts as solo, ensemble and/or accompanist performers. Includes instruction in playing and personal style development.

50.0912 Music — Brass Instruments Performance. An instructional program that prepares individual to master brass instruments and performing arts as solo, ensemble and/or accompanist performers. Includes instruction in playing and personal style development.

50.0913 Music — Woodwind Instruments Performance. An instructional program that prepares individual to master woodwind instruments and performing arts as solo, ensemble and/or accompanist performers. Includes instruction in playing and personal style development

50.0914 Music — Percussion Instruments Performance. An instructional program that prepares individual to master percussion instruments and performing arts as solo, ensemble and/or accompanist performers. Includes instruction in playing and personal style development

50.0999 **Music, Other.** Any instructional program in music not described above.

50.99 **Visual and Performing Arts, Other.** (See 50.9999)

50.9999 **Visual and Performing Arts, Other**. Any instructional program in visual and performing arts not described above.

51. **HEALTH PROFESSIONS AND RELATED SCIENCES.** A summary of groups of instructional programs that prepare individuals to provide health care, or related research and support services, to individuals or groups.

51.01 **Chiropractic (D.C., D.C.M.)**. (See 51.0707)

51.0101 **Chiropractic (D.C., D.C.M.).** An instructional program that prepares individuals to be independent professional practitioners of chiropractic, either straight or progressive. Includes instruction in chiropractic theory, spinal mechanics, spinal manipulation therapy, and radiologic diagnosis; and may also include principles of neuralgic health, nutrition, hydrotherapy, diet and exercise therapy, clinic and practice management, applicable regulations, and patient counseling.

51.02 **Communication Disorders Sciences and Services.** A group of instructional programs that prepare individuals to perform research and/or health care services related to speech, hearing, and language problems.

------ **Communications, General.** (Refer to 09.0101)

------ **Special Education**. (Refer to 13.10 Series)

51.0201 **Communication Disorders, General.** An instructional program that generally describes the principles and practice of identifying and treating disorders of human speech and hearing, and related problems of social communication and health. Includes instruction in developmental and acquired disorders, basic research and clinical methods, and prevention and treatment modalities.

------ **Education of the Deaf and Hearing-Impaired.** (Refer to 13.1003)

------ **Education of the Speech Impaired.** (Refer to 13.1012)

------ **Speech Teacher Education.** (Refer to 13.1331)

51.0202 **Audiology/Hearing Sciences.** An instructional program that describes the scientific study of the anatomy and physiology of the hearing and/or speech organs, their function and malfunction, and related environmental and behavioral topics. Includes instruction in bioacoustics; neuroanatomy of speech, hearing, and language; hearing measurement; communications embryology and congenital defects; hearing aids and related technology; hearing conservation and noise reduction research; and the experimental analysis of hearing, speech, and language disorders.

51.0203 **Speech-Language Pathology.** An instructional program that prepares individuals to provide therapeutic care to persons with physical or behavioral disorders that affect speaking or comprehension. Includes instruction in identifying and assessing speech and language disorders; specific treatment regimes; structure and development of aphasia; specific production, articulation, fluency, motor speech, and voice disorders; psychosocial and educational effects of speech/language disorders; and the planning and management of patient therapy.

51.0204 **Speech Pathology and Audiology.** An instructional program that prepares individuals to provide therapeutic care to persons with hearing and related communications disorders. Includes instruction in the principles of audiology; structure and development of hearing and communications disorders; speech disorder and hearing loss identification and assessment; aural rehabilitation; psychosocial and educational effects of speech and hearing disorders; and the planning and management of patient therapy.

51.0205 **Sign Language Interpreter.** An instructional program that prepares individuals to interpret oral speech for the hearing impaired. Includes instruction in American Sign Language or other deaf language, fingerspelling, orientation to deaf culture, and interpreting from signing to voice as well as from voice to signing.

51.0299 **Communication Disorders Sciences and Services, Other.** Any instructional program in communication disorders sciences and services not described above.

51.03 **Community Health Services.** A group of instructional programs that prepare individuals to serve the health needs of communities and groups within communities.

51.0301 **Community Health Services.** An instructional program that prepares individuals to serve as liaison between public health and other social services, and the recipients of health services in communities. Includes instruction in the basics of human health and nutrition, communicable diseases, environmental health, personal hygiene, care of infants, medications, and family and community services.

------ **Community Psychology**. (Refer to 42.0401)

------ **Community Organization, Resources and Services.** (Refer to 44.0201)

------ **Clinical and Medical Social Work**. (Refer to 51.1503)

------ **Social Work.** (Refer to 44.0701)

51.04 **Dentistry (DDS, D.M.D.)**. (See 51.0401)

51.0401 **Dentistry (DDS, D.M.D.).** An instructional program that prepares individuals for the independent professional practice of dentistry. Includes instruction in the prevention, diagnosis, and treatment of diseases and abnormalities of the teeth and gums and related parts of the oral cavity; related anatomical and physiological principles; professional ethics and standards; and supervised clinical practice.

------ **Pre-Dentistry Studies.** (Refer to 51.1101)

51.05 **Dental Clinical Sciences/Graduate Dentistry (MS, Ph.D.).** (See 51.0501)

51.0501 **Dental Clinical Sciences/Graduate Dentistry (MS, Ph.D.).** An instructional program that generally describes advanced study or research, by dentists or other medical doctors, in dental practice specialties and related sciences such as oral biology, endodontics, oral/maxillofacial surgery, orthodontics, pediatric dentistry, periodontics, dental materials, dental diagnostics, prosthodontics, dental nutrition, dental immunology, and dental pathology.

------ **51.28 Dental Residency Programs.** (Refer to **CHAPTER VI**)

51.06 **Dental Services**. A group of instructional programs that prepare individuals to provide dental health care services.

51.0601 **Dental Assistant.** An instructional program that prepares individuals to assist a dentist or dental hygienist in performing the functions of a dental practice. Includes instruction in chairside assistance, patient preparation, dental office functions, selected dental office laboratory procedures, and dental radiography.

51.0602 **Dental Hygienist**. An instructional program that prepares individuals to practice the cleaning of teeth and related oral health therapies, either independently or in collaboration with dentists. Includes instruction in basic preventive oral health care, oral health education, dental hygiene therapy, initial periodontal therapy, patient examination and counseling, dental radiography, local anesthesia, prosthetic casts, equipment operation and maintenance, and record-keeping.

51.0603 **Dental Laboratory Technician.** An instructional program that prepares individuals to make and repair dental prostheses and restorative appliances as prescribed by a dentist. Includes instruction in complete and partial denture construction, crown and fixed bridge fabrication, cast metal partial, customized porcelain and acrylic restorations, and building orthodontic appliances.

51.0699 **Dental Services, Other.** Any instructional in dental services not described above.

51.07 **Health and Medical Administrative Services.** A group of instructional programs that describe the management of the administrative aspects of the health care delivery system at the unit, office, building or system levels.

51.0701 **Health Systems/Health Services Administration.** An instructional program that prepares physicians and other professionals to develop, plan, and manage health care systems and service networks. Includes instruction in planning and coordination, business and financial management, fund-raising and marketing, public relations, human resources management, technical operations of health care systems, resource allocation, health law, and applications to specific health service situations.

51.0702 **Hospital/Health Facilities Administration.** An instructional program that prepares health and other professionals to apply the principles of management to the running of hospitals and similar health facilities. Includes instruction in building and facility management, planning and coordination, scheduling, business and financial management, fund-raising and marketing, public relations, human resources management and labor relations, technical hospital operations, and health law.

51.0703 **Health Unit Coordinator/Ward Clerk.** An instructional program that prepares individuals to perform routine clerical and reception duties in a patient care unit within a hospital or other health care facility. Includes instruction in receiving and directing visitors, transcribing medical orders, preparing requisition forms, scheduling appointments and monitoring the location of patients and personnel, under the supervision of a head nurse or ward supervisor.

51.0704 **Health Unit Manager/Ward Supervisor.** An instructional program that prepares individuals to supervise and coordinate administrative management functions for one or more patient care units in a health-care facility, under the supervision of a nursing or medical services administrator. Includes instruction in initiating clerical procedures, supervising ward clerks, and serving as a liaison to facility administration and medical staffs.

51.0705 **Medical Office Management.** An instructional program that prepares individuals to manage the administrative and business aspects of a medical practice or other health care office. Includes instruction in policy administration, conference planning, scheduling and coordination, managing business records and reports, financial record keeping, personnel supervision, public relations, administrative aspects of health law, and office operations.

51.0706 **Medical Records Administration.** An instructional program that prepares individuals to supervise and manage the preparation, storage, and use of medical records; and the management of related information systems. Includes instruction in the legal and technical aspects of medical records, the design and management of secure data systems, the role of records in medical surveys, and the supervision of medical records technicians and other related staff.

51.0707 **Medical Records Technology/Technician.** An instructional program that prepares individuals to classify medical information and prepare records, under the supervision of a medical records administrator. Includes instruction in medical records science, medical terminology, record classification, user needs, indexing, special records systems, computer operation, and applicable laws and regulations.

------ **Medical Secretary/Administrative Assistant**. (Refer to 52.0404)

51.0708 **Medical Transcription**. An instructional program that prepares individuals to execute verbatim medical minutes, reports and orders Includes instruction in dictation, analysis of written notes or visual evidence, computer and transcription machine operation, formal medical correspondence and report formats and requirements, and applicable laws and regulations.

------ **Court Reporter.** (Refer to 52.0405)

51.0799 **Health and Medical Administrative Services, Other.** Any instructional program in health and medical administrative services not described above.

51.08 **Health and Medical Assistants.** A group of instructional programs that prepare individuals to provide general or specialized assistance to physicians or other health professionals.

51.0801 **Medical Assistant.** An instructional program that prepares individuals to support physicians by providing assistance during patient examinations, treatment administration, and monitoring; by keeping patient and related health record information; and by performing a wide range of practice-related duties.

------ **Medical Administrative Assistant/Secretary**. (Refer to 52.0404)

51.0802 **Medical Laboratory Assistant.** An instructional program that prepares individuals to support laboratory directors and technicians by performing routine clinical laboratory procedures and clerical tasks.

------ **Nursing Assistant/Aide.** (Refer to 51.1614)

51.0803 **Occupational Therapy Assistant.** An instructional program that prepares individuals to support occupational therapists by providing assistance during patient examinations, treatment administration, and monitoring; by keeping patient and related health record information; and by performing a wide range of practice-related duties.

~~51.0804[**Ophthalmic Medical Assistant.**] An instructional program that prepares individuals to support ophthalmologists by providing assistance during patient examinations, treatment administration, and monitoring; by keeping patient and related health record information; and by performing a wide range of practice-related duties~~. (Deleted, included under 51.1802)

51.0805 **Pharmacy Technician/Assistant.** An instructional program that prepares individuals to support pharmacists by providing assistance during patient consultation, counter dispensing operations, and prescription preparation; keeping patient and related health record information; and by performing a wide range of practice-related duties.

51.0806 **Physical Therapy Assistant.** An instructional program that prepares individuals to support physical therapists by providing assistance during patient examinations, treatment administration, and monitoring; by keeping patient and related health record information; and by performing a wide range of practice-related duties.

51.0807 **Physician Assistant.** An instructional program that prepares individuals to manage the treatment of patients with routine or chronic health problems, in consultation with a physician or under indirect supervision. Includes instruction in patient interviewing and history taking, counseling, laboratory testing and analysis, administration of medication, minor surgery, prescribing routine drugs, preparing medical reports and Referrals to physicians and other specialists.

------ **Dental Assistant.** (Refer to 51.0601)

51.0808 **Veterinarian Assistant/~~Animal Health Technician~~.** An instructional program that prepares individuals to support veterinarians by providing assistance during animal examinations, treatment administration, and monitoring; by keeping animal and related health record information; and by performing a wide range of practice-related duties.

51.0899 **Health and Medical Assistants, Other**. Any instructional program for health and medical assistants not described above.

51.09 **Health and Medical Diagnostic and Treatment Services *Technologies/ Technicians.*** A group of instructional programs that prepare individuals to use medical equipment and materials for diagnostic, immediate care and treatment purposes.

51.0901 **Cardiovascular Technology/Technician**. An instructional program that prepares individuals to perform invasive and non-invasive tests to monitor human heart and circulatory system health, and to administer prescribed treatment therapies, under the supervision of a physician. Includes instruction in the administration of tests such as EKG, phonocardiogram, and stress tests; therapeutic procedures such as cardiac catheterization and Holter monitoring; patient preparation; equipment preparation and maintenance; and record keeping.

51.0902 **Electrocardiograph Technology/Technician**. An instructional program that prepares individuals to perform examinations of electromotive variations in human heart activity using an electrocardiograph machine, under the supervision of a physician. Includes instruction in patient preparation, equipment operation and maintenance, making minor repairs, and record keeping.

51.0903 **Electroencephalograph Technology/Technician**. An instructional program that prepares individuals to perform examinations of electromotive variations in human brain activity using an electroencephalograph machine and to make related data analyses, under the supervision of a physician. Includes instruction in patient preparation, equipment operation and maintenance, EEG test procedures, data analysis, determination of brain death, tumor identification, and brain injury and disorder identification.

51.0904 **Emergency Medical Technology/Technician.** An instructional program that prepares individuals to perform initial medical diagnosis, treatment, and comprehensive care in medical crises, under the general supervision of a coordinating physician. Includes instruction in all aspects of basic health care; disease, disorder, and injury symptomology and diagnosis; emergency medical treatment procedures for various injuries and disease outbreaks; basic pharmacology; anesthetics; intravenous and other drug administration procedures; obstetrics procedures; basic surgical techniques; emergency medical equipment operation and maintenance; special care of patients exposed to heat, cold, radiation, or contagious disease; and administrative aspects of emergency medicine. Programs may include emergency vehicle operation and patient transportation procedures, depending on level of training.

51.0905 **Nuclear Medical Technology/Technician**. An instructional program that prepares individuals to prepare and administer radioactive isotopes via injections, and to measure glandular and other bodily activity by means of in vitro and in vivo detection and specimen testing. Includes instruction in equipment operation and maintenance, materials storage and safety preparation.

51.0906 **Perfusion Technology/Technician.** An instructional program that prepares individuals to operate heart-lung machines and monitor patient condition under the direct supervision of a surgeon. Includes instruction in patient examination and preparation, equipment operation and maintenance, anesthesia, and operating room procedures.

51.0907 **Medical Radiologic Technology/Technician**. An instructional program that prepares individuals to perform diagnostic examinations, and administer therapeutic procedures, using x-rays and related radiations, under the supervision of a radiologist. Includes instruction in conducting CAT scans (computer tomography), xeradiography, thermography and x-ray procedures; equipment operation and maintenance; patient preparation; and record keeping.

------ **Health Physics/Radiologic Health.** (Refer to 51.2205)

51.0908 **Respiratory Therapy Technician**. An instructional program that prepares individuals to perform therapeutic and life-support procedures using respiratory equipment, under the supervision of a physician. Includes instruction in administering inhalants via mist, mask, tent or other procedures; monitor heart-lung machines and other intensive care therapies; anesthesia; emergency procedures; equipment operation and maintenance; storage and safety methods; and record-keeping.

51.0909 **Surgical/Operating Room Technician.** An instructional program that prepares individuals to perform general technical support tasks in the operating room before, during, and after surgery. Includes instruction in pre-operation patient and surgical team preparation, handling surgical instruments at tableside, supply inventory maintenance before and during operations, sterilization and cleaning of equipment, maintaining clean and sealed environments, operating room safety procedures, and record-keeping.

51.0910 **Diagnostic Medical Sonography Technician.** An instructional program that prepares individuals to perform diagnostic and monitoring procedures using acoustic energy, under the supervision of a physician. Includes instruction in patient preparation, ultrasound testing and examination procedures, sonogram evaluation, record keeping, and equipment operation and maintenance.

51.0911 Electroneurophysiology Technology/Technician. (Definition to be developed – suggestions welcome)

51.0912 Magnetic Resonance Imaging Technology/Technician. (Definition to be developed – suggestions welcome)

51.0999 **Health and Medical Diagnostic and Treatment Services *Technologies/Technicians*, Other**. Any instructional program in health and medical diagnostic and treatment services not described above.

51.10 **Health and Medical Laboratory Technologies/*Technicians***. A group of instructional programs that prepare individuals to perform diagnostic and analytical laboratory procedures that support medical research and practice.

51.1001 **Blood Bank Technology/Technician**. An instructional program that prepares individuals to perform classification, analysis, and related tests on banked blood under the supervision of a pathologist, physician, or laboratory director. Includes instruction in laboratory hematology; laboratory and blood bank procedures; blood donor selection; blood collection, classification, storage, and processing procedures; topological and compatibility tests; blood bank inventory and delivery procedures; record-keeping; and personnel and volunteer supervision.

51.1002 **Cytotechnologist**. An instructional program that prepares individuals to perform oncological and related pathological analyses of human tissue samples, under the supervision of a pathologist. Includes instruction in pathology laboratory procedures; equipment operation and maintenance; conducting Pap and other test procedures for cancer diagnosis; analytical procedures for other cell abnormalities; slide and tissue sample preparation; and record keeping.

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51.1003 **Hematology Technology/Technician.** An instructional program that prepares individuals to perform tests and analyses of patients' blood samples under the supervision of a hospital laboratory director or physician. Includes instruction in laboratory procedures; laboratory hematology; conducting quantitative, qualitative, and coagulation tests on cellular and plasma blood components; equipment operation and maintenance, and record keeping.

51.1004 **Medical Laboratory Technician.** An instructional program that prepares individuals to perform general medical laboratory procedures and routines, under the supervision of a physician or laboratory director. Includes instruction in medical laboratory procedures; equipment operation and maintenance; principles of different bacteriological, biological, and chemical test procedures; equipment and sample inventorying and storage; laboratory safety procedures; laboratory assistant supervision; and record keeping.

51.1005 **Medical Technology.** An instructional program that prepares individuals as independent laboratory scientists and laboratory supervisors in the analysis of human body fluids and tissues. Includes instruction in clinical chemistry, clinical microbiology, clinical immunology, immunohematology, clinical hematology, chemical and physical analytic techniques, equipment technology, data and record systems maintenance and experiment design. Also includes the preparation and interpretation of research and medical reports.

51.1006 **Optometric/~~Ophthalmic~~ Laboratory Technician.** An instructional program that prepares individuals to make prescription lenses and related visual aid equipment, under the supervision of an optician or optometrist. Includes instruction in optical laboratory procedures; principles of vision optics; lens grinding and polishing; contact lens fabrication; glasses construction; equipment operation and maintenance; safety procedures; precision instrument work and testing; prescription interpretation; and record-keeping.

51.1099 **Health and Medical Laboratory Technologies/Technicians, Other**. Any instructional program in health and medical laboratory technologies not described above.

51.11 **Health and Medical Preparatory Programs.** A group of instructional programs that prepare individuals for admission to first-professional programs in medical or other health fields.

51.1101 **Pre-Dentistry Studies**. An instructional program that prepares individuals for admission to a first-professional program in dentistry.

51.1102 **Pre-Medicine Studies.** An instructional program that prepares individuals for admission to a first-professional program in allopathic, osteopathic, or podiatric medicine.

51.1103 **Pre-Pharmacy Studies**. An instructional program that prepares individuals for admission to a first-professional program in pharmacy.

51.1104 **Pre-Veterinary Studies.** An instructional program that prepares individuals for admission to a first-professional program in veterinary medicine.

51.1105 Pre-Nursing Studies. An instructional program that prepares individuals for admission to a professional program in Nursing.

51.1199 **Health and Medical Preparatory Programs, Other.** Any instructional program in health and medical first-professional preparation not described above.

51.12 **Medicine (M.D.).** (See 51.1201)

51.1201 **Medicine (M.D.).** An instructional program that prepares individuals for the independent professional practice of allopathic medicine. Includes instruction in the principles and procedures used in the observation, diagnosis, care and treatment of illness, disease, injury, deformity, or other anomalies in humans; ethics and professional standards; and supervised clinical practice.

------ **Medical Residency Programs.** (Refer to Series 51.29 CHAPTER VI)

------ **Physician Assistant.** (Refer to 51.0807)

------ **Pre-Medicine Studies.** (Refer to 51.1102)

51.13 **Medical Basic Sciences.** A group of instructional programs that describe advanced research in the disciplines that support the clinical practice of medicine.

------ **Health and Medical Biostatistics.** (Refer to 51.2204)

------ **Medical Pharmacology and Pharmaceutical Sciences.** (Refer to 51.2003)

51.1301 **Medical Anatomy.** An instructional program that describes advanced research, by medical graduates and others, on the structure, substructure and ultrastructure of the human body, and the relationship of anatomical research to the restoration and preservation of good health.

51.1302 **Medical Biochemistry.** An instructional program that describes advanced research, by medical graduates and others, on the nature and chemical composition of the substances that make up the human body, the changes in these substances, and the understanding of disease processes.

51.1303 **Medical Biomathematics and Biometrics.** An instructional program that describes advanced research, by medical graduates and others, on the application of mathematical models and principles to the measurement and understanding of the human organism.

51.1304 **Medical Physics/Biophysics**. An instructional program that describes advanced research, by medical graduates and others, on the mechanics, sensory aspects, bioelectric phenomena, muscle function, genetic and molecular fine structures, and membrane transportation mechanisms of the human body.

51.1305 **Medical Cell Biology.** An instructional program that describes advanced research, by medical graduates and others, on the biological structure and function of human cells, including cellular mechanisms, cell-to-cell communication and the pathogenesis of disease in cells.

51.1306 **Medical Genetics.** An instructional program that describes advanced research, by medical graduates and others, on the relationship between inherited traits and characteristics and human health conditions, including inherited metabolic diseases, environmental damage to genetic material, human genetic engineering, and cloning.

51.1307 **Medical Immunology.** An instructional program that describes advanced research, by medical graduates and others, on the relation between immunological system functions and human health conditions, including immune response mechanisms, immunodeficiency, antibody definition and antibody production.

51.1308 **Medical Microbiology**. An instructional program that describes advanced research, by medical graduates and others, on the nature and properties of harmful microorganisms and of the disease processes they induce in humans.

51.1309 **Medical Molecular Biology.** An instructional program that describes advanced research, by medical graduates and others, on the application of molecular and macromolecular studies to the investigation of genetic, hormonal and disease problems in human organisms.

51.1310 **Medical Neurobiology**. An instructional program that describes advanced research, by medical graduates and others, on the anatomy, physiology, biochemistry and molecular biology of the brain, nerve cells and nerve tissue and their relation to human behavior and health.

51.1311 **Medical Nutrition**. An instructional program that describes advanced research, by medical graduates and others, on the chemical nature of food substances; the processes by which the human body ingests, digests, absorbs, transports, utilizes and excretes food and nutrients; and their relation to human behavior and health.

51.1312 **Medical Pathology.** An instructional program that describes advanced research, by medical graduates and others, on the causes and effects of diseases and disease mechanisms in human beings. Includes instruction in renal, cardiovascular, neuro-, pulmonary, bone, liver and gastrointestinal, surgical, autopsy, cellular, biochemical and immunopathology.

51.1313 **Medical Physiology**. An instructional program that describes advanced research, by medical graduates and others, on the functions of the human body and its parts, and their relationship to the restoration and preservation of good health. Includes instruction in cellular, cardiovascular, renal, neuro-, endocrine, gastrointestinal, and respiratory physiology.

51.1314 **Medical Toxicology**. An instructional program that describes advanced research, by medical graduates and others, on the nature and extent of adverse effects of synthetic and naturally occurring chemical substances on human beings. Includes instruction in chemical mechanisms and the specialties of reproductive, developmental, genetic, forensic, inhalation and neurobehavioral toxicology.

51.1399 **Medical Basic Sciences, Other**. Any instructional program in basic medical sciences not described above.

51.14 **Medical Clinical Sciences (MS, Ph.D.)**. (See 51.1401)

51.1401 **Medical Clinical Sciences (MS, Ph.D.).** An instructional program that describes the scientific study, by medical residents and other medical doctors, of specialized medical practice arts and related clinical research. Includes instruction in fields such as pediatrics, anesthesiology, obstetrics, gynecology, oncology, surgery, radiology, internal medicine, neurology, clinical pathology, psychiatry, and others.

------ **Medical Residency Programs.** (Refer to Series 51.29 CHAPTER VI)

51.15 **Mental Health Services.** A group of instructional programs that prepare individuals to provide counseling and support services related to the care and treatment of persons with mental, emotional or behavioral disorders.

------ **Clinical Psychology.** (Refer to 42.0201)

------ **School Psychology.** (Refer to 42,1701)

------ **Counseling Psychology.** (Refer to 42.0601)

51.1501 **Alcohol/Drug Abuse Counseling.** An instructional program that prepares individuals to counsel drug users, addicts, family members, and associates in a wide variety of settings, using various preventive strategies and treatment regimes. Includes instruction in outreach; patient education; therapeutic intervention methods; diagnostic procedures; addiction symptomology; record-keeping; liaison with community health, social services, law enforcement, and legal services; and applicable regulations.

51.1502 **Psychiatric/Mental Health Services Technician.** An instructional program that prepares individuals to assist psychiatrists, psychologists, nurses and other mental health personnel in patient care and treatment. Includes instruction in patient interviewing, data recording, taking vital signs, the supervised administration of routine medication and assisting in examinations and treatment procedures.

51.1503 **Clinical and Medical Social Work.** An instructional program that prepares individuals for the independent practice of social work in mental health clinics, hospitals, and community health service organizations. Includes instruction in psychiatric casework, clinical interviewing techniques, therapeutic intervention strategies, psychological test administration, family counseling, social rehabilitation, record keeping, and liaison with other community support agencies and services.

------ **Social Work.** (Refer to 44.0701)

51.1599 **Mental Health Services, Other.** Any instructional program in mental health/human services not described above.

51.16 **Nursing.** (See 51.1601-51.1601)

51.1601 **Nursing (R.N. Training, e.g., Diploma, A.S.N., B.S.N., MSN).** An instructional program that generally prepares individuals in the knowledge, techniques and procedures for promoting health, providing care for sick, disabled, informed, or other individuals or groups. Includes instruction in the administration of medication and treatments, assisting a physician during treatments and examinations, Referring patients to physicians and other health care specialists, and planning education for health maintenance.

51.1602 **Nursing Administration (Post-R.N.).** An instructional program that prepares registered nurses (R.N.) to manage Nursing personnel and services in hospitals and other health care delivery agencies.

51.1603 **Nursing, Adult Health (Post-R.N.).** An instructional program that prepares registered nurses (R.N.) to provide general care for adult patients, including the administration of medication and treatments, assisting a physician during treatments and examinations, Referring patients to physicians and other health care specialists, and planning education for health maintenance.

51.1604 **Nursing Anesthetist (Post-R.N.).** An instructional program that prepares registered nurses (R.N.) to administer anesthetics and provide care for patients before, during and after anesthesia.

51.1605 **Nursing, ~~Family Practice~~ Practitioner (Post-R.N.)**. An instructional program that prepares registered nurses (R.N.) to provide general care for family groups and individual health needs in the context of family living, including the administration of medication and treatments, assisting a physician during treatments and examinations, Referring patients to physicians and other health care specialists, and planning education for health maintenance.

51.1606 **Nursing, Maternal/Child Health (Post-R.N.).** An instructional program that prepares registered nurses (R.N.) to provide prenatal care to pregnant women and postnatal care to mothers and their infants.

51.1607 **Nursing Midwifery (Post-R.N.).** An instructional program that prepares registered nurses (R.N.) to independently deliver babies and treat mothers in the prenatal, delivery, and post-delivery periods. Includes instruction in pre-delivery screening, physician Referral, and the care of infants during the delivery and immediate post-delivery phases.

51.1608 **Nursing Science (Post-R.N.).** An instructional program in research that describes the study of advanced clinical practices, research methodologies, the administration of complex nursing services, and that prepares nurses to further the progress of nursing research through experimentation and clinical applications.

51.1609 **Nursing, Pediatric (Post-R.N.).** An instructional program that prepares registered nurses (R.N.) to provide care for children from infancy through adolescence. Includes instruction in the administration of medication and treatments, assisting physicians, patient examination and Referral, and planning and delivering health maintenance and health education programs.

51.1610 **Nursing, Psychiatric/Mental Health (Post-R.N.).** An instructional program that prepares registered nurses (R.N.) to promote mental health and provide nursing care to patients with mental, emotional or behavioral disorders, in mental institutions or other settings.

51.1611 **Nursing, Community/Public Health (Post-R.N).** An instructional program that prepares registered nurses (R.N.) to promote health and provide preventive and curative nursing services for individuals, groups or communities under the supervision of a public health agency.

51.1612 **Nursing, Surgical (Post-R.N.).** An instructional program that prepares registered nurses (R.N.) to provide care to patients before and during surgery, and provide tableside assistance to surgeons.

51.1613 **Practical Nurse (L.P.N. Training).** An instructional program that prepares individuals to assist in providing general nursing care under the direction of a registered nurse, physician or dentist. Includes instruction in taking patient vital signs, applying sterile dressings, patient health education and assistance with examinations and treatment.

51.1614 **Nursing Assistant/Aide.** An instructional program that prepares individuals to perform routine nursing-related services to patients in hospitals or long-term care facilities, under the training and supervision of a registered nurse or licensed practical nurse.

~~51.1615 **[Home Health Aide.]** An instructional program that prepares individuals to assist elderly, convalescent or handicapped patients in their homes by providing for their physical, mental, emotional and/or social health care needs, under the supervision of a registered nurse~~ (Moved to 51.2602)

51.1616 Nursing Educator (Post R.N.). (Definition to be developed- suggestions welcome).)

51.1617 Nursing, Clinical Specialist (Post R.N.) (Definition to be developed – suggestions welcome)

51.1618 Nursing, Critical Care (Post R.N.). (Definition to be developed – suggestions welcome)

51.1619 Nursing, Occupational Health (Post R.N.). (Definition to be developed – suggestions welcome)

51.1620 Nursing, Pre-Operative (Post R.N.). (Definition to be developed – suggestions welcome)

51.1621 Nursing, Gerontology (Post R.N.) (Definition to be developed – suggestions welcome)

51.1699 **Nursing, Other**. Any instructional program in nursing not described above.

51.17 **Optometry**. (See 51.1701).

51.1701 **Optometry** (OD). An instructional program that prepares individuals for the independent professional practice of optometry and that describes the principles and techniques for examining, diagnosing and treating conditions of the visual system. Includes instruction in prescribing glasses and contact lenses, other optical aids, corrective therapies, patient counseling, physician referral, practice management, and ethics and professional standards.

51.18 **~~Ophthalmic~~/Optometric Services**. A group of instructional programs that prepare individuals to assist ophthalmologists and/or optometrists in providing services.

51.1801 **Opticianry/Dispensing Optician.** An instructional program that prepares individuals to fill prescriptions ordered by ophthalmologists or optometrists and to dispense optical supplies and equipment. Includes instruction in shaping and grinding lenses, frame selection and fitting, patient counseling, supervision of assistants and the operation of a business.

51.1802 **Optical Technician/Assistant.** An instructional program that prepares individuals to assist optometrists or ophthalmologist providing diagnostic, treatment and dispensing services. Includes instruction in vision testing, corneal measurement, color screening, patient counseling, eyewear fitting and modification, and office administration duties.

~~51.1803 **[Ophthalmic Medical Technologist.]** An instructional program that prepares individuals to perform ophthalmic clinical photography and florescence angiography of the eye, ophthalmic electrophysiological and microbiological procedures, and administer ocular motility and binocular function tests under the supervision of ophthalmologist~~. (Deleted, included under 51.1802)

51.1804 **Orthoptics**. An instructional program that prepares individuals, under the supervision of an ophthalmologist, to correct vision defects in children and adults via therapeutic exercises. Includes instruction in strabismus, amblyopia, patient care and counseling, and diagnostic testing.

51.1899 **~~Ophthalmic~~/Optometric Services, Other.** Any instructional program in ophthalmic/optometric services not described above.

51.19 **Osteopathic Medicine (DO).** (See 51.1901).

51.1901 **Osteopathic Medicine (DO)**. An instructional program that prepares individuals for the independent professional practice of osteopathy, a system of holistic diagnosis and treatment of health problems. Includes instruction in all accepted allopathic medical diagnostic and treatment methods, plus spinal manipulation; musculoskeletal and nervous system influence on body health; promoting natural defense mechanisms; and the interrelation of the various body systems.

51.20 **Pharmacy.** (See 51.2001).

51.2001 **Pharmacy (PharmD.)**. An instructional program that prepares individuals for the independent professional practice of pharmacy. Includes instruction in principles of medicinal chemistry, drug behavior, and drug metabolism; mixing, preparing, and dispensing prescription medications; pharmacy practice management; patient advising; ethical and professional standards; and applicable laws and regulations.

------ **Pharmacy Technician/Assistant.** (Refer to 51.0805)

------ **Pre-Pharmacy Studies**. (Refer to 51.1103)

51.2002 **Pharmacy Administration and Pharmaceutics.** An instructional program that prepares pharmacists to manage pharmaceutical operations and programs in industrial, hospital, and other clinical settings. Includes instructional in business management principles; pharmaceutical laboratory and production operations and organization; social and economic policy aspects of pharmaceutics; and specific applications to such areas as industrial pharmaceutics, clinical pharmaceutics, hospital pharmaceutics, pharmacy industry and distribution studies, and the regulatory aspects of pharmaceutics.

51.2003 **Medical Pharmacology and Pharmaceutical Sciences.** An instructional program that describes the scientific study, by pharmacists and other medical researchers, of drugs, drug behavior, and the actions of chemical substances on human systems and whole organisms. Includes instruction in such areas as biopharmaceutics, pharmacokinetics and dynamics, drug metabolism, bioanalytical assay, pharmacognosy, cosmetic science, neuropharmacology, behavioral effects of drugs, radiopharmacology, and pharmaceutical socioeconomic policy.

------ **Pharmacology, Human and Animal.** (Refer to 26.0705)

------ **Medicinal/Pharmaceutical Chemistry**. (Refer to 40.0505)

51.2099 **Pharmacy, Other.** Any instructional program in pharmacy not described above.

51.21 **Podiatry (D.P.M., DP, Pod.D.).** (See 51.2101).

51.2101 **Podiatry (D.P.M., DP, Pod.D.).** An instructional program that prepares individuals for the independent professional practice of podiatric medicine. Includes of the human foot; ethics and professional standards; and supervised clinical instruction in the principles and procedures used in the observation, diagnosis, care and treatment of disease, injury, deformity, or other anomalies practice.

51.22 **Public Health**. A group of instructional programs that prepare individuals to provide publicly supervised health services to community, regional, national and international health services.

51.2201 **Public Health, General.** An instructional program that prepares individuals to plan, implement, and evaluate publicly supervised and administered health care programs and systems. Includes instruction in principles of epidemiology, health law and regulations, law enforcement, biostatistical methods, budget policy and economics, report making and personnel supervision.

------ **Health Teacher Education.** (Refer to 13.1307)

------ **Public Health Nursing.** (Refer to 51.1611)

51.2202 **Environmental Health.** An instructional program that prepares public health specialists to monitor and evaluate potential and confirmed environmental health hazards, and to plan and manage environmental health programs. Includes instruction in environmental toxicology, genetic toxicology, biohazard research, test and evaluation procedures, measurement instrumentation and equipment operation, environmental and health law and regulations, and applications to specific environmental health problems.

------ **Environmental/Environmental Health Engineering.** (Refer to 14.1401)

------ **Environmental Control Technologies.** (Refer to 15.05 Series)

51.2203 **Epidemiology**. An instructional program that describes the scientific study, by public health scientists and other medical researchers, of the distribution of disease in human populations; patterns in the life cycles of infectious diseases; and methods of preventing disease outbreaks and promoting population health.

51.2204 **Health and Medical Biostatistics.** An instructional program that describes the advanced study of the health applications of statistical models and analytical techniques. Includes instruction in descriptive and inferential studies of human populations, the human organism and its biological components.

51.2205 **Health Physics/Radiologic Health.** An instructional program that describes the scientific measurement of radiation levels and dosages affecting human beings and that prepares individuals to monitor radiation health. Includes instruction in radiation dosimetry methods; the health effects of natural and man-made radiation; operation and maintenance of test and monitoring equipment; and applicable standards and regulations pertaining to radiation emissions.

51.2206 **Occupational Health and Industrial Hygiene.** An instructional program that prepares public health specialists to monitor and evaluate health standards related to industrial and commercial workplaces and locations. Includes instruction in occupational health and safety standards and regulations; requirements of particular jobs and industrial processes; test and monitoring equipment operation and maintenance; industrial toxicology; worker health and safety education; and the analysis of job-related equipment, behavior, practices, and protective gear.

------ **Occupational Safety and Health Technology/Technician**. (Refer to 15.0701)

51.2207 **Public Health Education and Promotion**. An instructional program that prepares public health specialists to provide specialized educational and informational services to populations affected by disease outbreak, health hazards, or who are at risk. Includes instruction in health publicity, public relations, public health campaign management, preparation of public health teaching aids and instructional materials, and applications to specific public health problems and campaign audiences.

51.2299 **Public Health, Other.** Any instructional program in public health not described above.

51.23 **Rehabilitation/Therapeutic Services.** A group of instructional programs that prepare individuals to provide assistance in stabilizing and/or improving diagnosed health problems.

51.2301 **Art Therapy.** An instructional program that prepares individuals to employ art as a tool to assist patients in overcoming physical disability, resolving emotional conflicts and enhancing communications with others.

51.2302 **Dance Therapy**. An instructional program that prepares individuals to employ dance as a tool to assist patients in overcoming physical disability, resolving emotional conflicts and enhancing communications with others.

51.2303 **Hypnotherapy.** An instructional program that prepares individuals to employ hypnosis as a tool to assist patients in reducing physical pain, resolving emotional conflicts and enhancing communications with others. Includes instruction in trance inducement and its relation to other healing arts specialties.

51.2304 **Movement Therapy**. An instructional program that prepares individuals to employ hands-on repatterning and verbal instruction as a tool to assist patients in overcoming physical disability, resolving emotional conflicts and enhancing communications with others. Includes instruction in physiological patterning/cognitive-motor functioning, movement analysis and performance, psychological/emotional expression and health maintenance and improvement.

51.2305 **Music Therapy**. An instructional program that prepares individuals to employ music as a tool to assist patients in overcoming physical disability, resolving emotional conflicts and enhancing communications with others. Includes instruction in leading and monitoring individual and group musical activities with patients who suffer from physical or mental disorders.

51.2306 **Occupational Therapy**. An instructional program that prepares individuals to employ self-care, work and play activities as therapeutic regimes for patients in order to increase independent functioning, enhance development and assist recovery from disability. Includes instruction in adapting therapeutic tasks or environments to achieve maximum independence and enhance the quality of life for each patient.

------ **Occupational Therapy Assistant.** (Refer to 51.0803)

51.2307 **Orthotics/Prosthetics.** An instructional program that prepares individuals, under the supervision of a physician and in consultation with therapists, to make and fit orthoses and prostheses. Includes instruction in design, crafting and production techniques, properties of materials, anatomy and physiology, and patient counseling.

51.2308 **Physical Therapy.** An instructional program that prepares individuals, upon Referral by a physician, to evaluate patients and plan and execute treatment programs to prevent or remediate physical dysfunction, relieve pain and prevent further disability. Includes instruction in patho- and therapeutic kinesiology, equipment design and maintenance, treatment regimes, and the evaluation of skeletal, neurological and cardiovascular disorders. Also includes instruction in patient counseling, personnel supervision and record keeping.

------ **Physical Therapy Assistant.** (Refer to 51.0806)

51.2309 **Recreational Therapy.** An instructional program that prepares individuals to plan, organize, and direct medically approved programs of leisure activity to promote patient physical and mental health and functioning in social interactions. Includes instruction in volunteer and staff supervision, patient evaluation and monitoring, behavioral therapy, and recreation program and pre-discharge planning.

51.2310 **Vocational Rehabilitation Counseling.** An instructional program that prepares individuals, under the supervision of physicians or psychologists, to assist patients in coping with physical and/or mental disabilities that affect work. Includes instruction in vocational counseling, employment assistance and placement, patient evaluation and monitoring, administering psychological and psychomotor tests, and the planning of training programs.

51.2311 Massage Therapy/Therapeutic Massage. (Definition to be developed – suggestions welcome)

51.2399 **Rehabilitation/Therapeutic Services, Other**. An instructional program in rehabilitation/therapeutic services not described above.

51.24 **Veterinary Medicine (D.V.M.).** (See 51.2401).

51.2401 **Veterinary Medicine (D.V.M.).** An instructional program that prepares individuals for the independent professional practice of veterinary medicine. Includes instruction in the principles and procedures used in the observation, diagnosis, care and treatment of illness, disease, injury, deformity, or other anomalies in animals; ethics and professional standards; and supervised clinical practice.

------ **Agricultural Animal Health.** (Refer to 02.0203)

------ **Pre-Veterinary Studies**. (Refer to 51.1104)

51.25 **Veterinary Clinical Sciences (MS, Ph.D.).** (See 51.2501)

51.2501 **Veterinary Clinical Sciences (MS, Ph.D.).** An instructional program that describes the scientific study, by veterinarians, of the clinical specializations and supporting applied sciences related to the practice of veterinary medicine. Includes instruction in areas such as veterinary anatomy; veterinary physiology; veterinary pharmacology; veterinary radiology; veterinary pathology; veterinary toxicology; veterinary microbiology; veterinary preventive medicine; veterinary parasitology; veterinary immunology; veterinary bacteriology; veterinary virology; large animal surgery and medicine; small animal surgery and medicine; avian medicine; theriogenology; laboratory animal science; and animal nutrition.

------ **Veterinary Residency Programs**. (Refer to **CHAPTER VI**)

51.26 **Miscellaneous Health Aides.** (See 51.2601-51.2699)

51.2601 Institutional Health Aide. Any of a group of instructional programs that prepare individuals to perform routine care and assistance duties for patients, under the direct supervision of other health care professionals, and/or to perform routine maintenance and general assistance duties in health care laboratories.

------ **Nurse Assistant/Aide**. (Refer to 51.1614)

51.2602 **Home Health Aide.** An instructional program that prepares individuals to assist elderly, convalescent or handicapped patients in their homes by providing for their physical, mental, emotional and/or social health care needs, under the supervision of a registered nurse (Moved from 51.1615).

51.2603 Personal Care Attendant.. (Definition to be developed – suggestions welcome)

51.2699 Miscellaneous Health Aids, Other. An instructional program in health aiding services not described above.

51.27 **Miscellaneous Health Sciences and Allied Health Services.** A group of instructional programs that prepare individuals in health-related subjects and fields not included in Health Sciences and Allied Health Services Series described above.

51.2701 **Acupuncture and Oriental Medicine (*AOM*).** An instructional program that prepares individuals to administer Oriental and related traditional treatment therapies, and dispense traditional herbal and other medications, as independent practitioners. Includes instruction in acupuncture, moxibustion, Oriental pharmacology, Oriental medical theory and principles, diagnostic procedures, patient counseling, and related health care arts.

51.2702 **Medical Dietician.** An instructional program that prepares individuals to plan and administer special diets in clinical situations, under the supervision of or in consultation with physicians or other health professionals. Includes instruction in the principles of medical nutrition; the use of nutrition as a treatment regime; the management of health care facility food services; special menu planning and food preparation; and patient education and counseling.

51.2703 **Medical Illustrating.** An instructional program that prepares individuals to demonstrate medical facts by the creation of illustrations such as drawings, models, photographs, digital images and films; either independently or under physicians' supervision. Includes instruction in illustrating live treatment situations as well as working from data, notes and samples.

51.2704 **Naturopathic and Homeopathic Medicine.** An instructional program that prepares individuals to provide primary care and promote patient health through the use of natural therapies and related physiological, psychological and mechanical methods. Includes instruction in natural law, phytotherapy, electrotherapy, physio-therapy, mechanotherapy, naturopathic manipulation, homeopathy, minor surgery, and herbal remedies.

51.2705 **Psychoanalysis**. An instructional program that prepares individuals to provide psychotherapy to individuals and groups based on the psychodynamic theory evolved from the work of Freud, Adler and Jung. Includes instruction in personality theory, dream analysis, free association and transference theory and techniques, psychodynamic theory, developmental processes, applications to specific clinical conditions, practice standards and management, and client relations.

51.2706 Traditional Healing Arts, Other Than AOM. An instructional program that prepares individuals to practice any of the traditional medical and healing arts of Europe, Asia, Africa, Oceania, and the Americas other than Acupuncture and Oriental Medicine, which are East Asian specialties. Includes instruction in such subjects as Ayurveda, folk medicine, herbal medicine, aromatherapy, and others.

51.2799 Miscellaneous Health Sciences and Allied Health Services, Other .. An instructional program in health sciences and allied health services not described above.

51.99 **Health Professions and Related Sciences, Other**. (See 51.9999)

51.9999 **Health Professions and Related Sciences, Other**. Any instructional program in health professions and related sciences not described above.

52. **BUSINESS MANAGEMENT AND ADMINISTRATIVE SERVICES**. A summary of groups of instructional programs that prepare individuals to perform managerial, research, and technical support functions related to the commercial and/or non-profit production, buying, and selling of goods and services.

52.01 **Business.** (See 52.0101)

52.0101 **Business, General.** An instructional program that generally describes the world of business, including the processes of interchanging goods and services (buying, selling and producing), business organization, and accounting as used in profit-making and nonprofit public and private institutions and agencies. Programs may prepare individuals to apply business principles and techniques in various occupational settings.

------ **Business Teacher Education (Vocational).** (Refer to 13.1303)

52.02 **Business Administration and Management.** (See 52.0201).

52.0201 **Business Administration and Management, General.** An instructional program that generally prepares individuals to plan, organize, direct, and control the functions and processes of a firm or organization. Includes instruction in management theory, human resources management and behavior, accounting and other quantitative methods, purchasing and logistics, organization and production, marketing, and business decision-making.

------ **Agricultural Business and Management.** (Refer to 01.01 Series)

------ **Engineering/~~Industrial~~ Management.** (Refer to 14.3001)

------ **Sport and Fitness Administration/Management.** (Refer to 31.0504)

------ **Aviation Management.** (Refer to 49.0104)

------ **Arts Management**. (Refer to 50.0704)

------ **Music Business Management and Merchandising**. (Refer to 50.0909)

------ **Health System/Health Services Administration.** (Refer to 51.0701)

------ **Hospital/Health Facilities Administration**. (Refer to 51.0702)

52.0202 **Purchasing, Procurement and Contracts Management.** An instructional program that prepares individuals to manage and/or administer the processes by which a firm or organization contracts for goods and services to support its operations, as well as contracts it to sell to other firms or organizations. Includes instruction in contract law, negotiations, buying procedures, government contracting, cost and price analysis, vendor relations, contract administration, auditing and inspection, relations with other firm departments, and applications to special areas such as high-technology systems, international purchasing, and construction.

52.0203 **Logistics and Materials Management.** An instructional program that prepares individuals to manage and coordinate all logistical functions in an enterprise, ranging from acquisitions to receiving and handling, through internal allocation of resources to operations units, to the handling and delivery of output. Includes instruction in acquisitions and purchasing, inventory control, storage and handling, just-in-time manufacturing, logistics planning, shipping and delivery management, transportation, quality control, resource estimation and allocation, and budgeting.

52.0204 **Office Supervision and Management.** An instructional program that prepares individuals to supervise and manage the operations and personnel of business offices and management-level divisions. Includes instruction in employee supervision, management, and labor relations; budgeting; scheduling and coordination; office systems operation and maintenance; office records management, organization, and security; office facilities design and space management; preparation and evaluation of business management data; and public relations.

------ **Medical Office Management.** (Refer to 51.0705)

52.0205 **Operations Management and Supervision.** An instructional program that prepares individuals to manage and direct the physical and/or technical functions of a firm or organization, particularly those relating to development, production, and manufacturing. Includes instruction in principles of general management, manufacturing and production systems, plant management, equipment maintenance management, production control, industrial labor relations and skilled trades supervision, strategic manufacturing policy, systems analysis, productivity analysis and cost control, and materials planning.

52.0206 **Non-Profit and Public Management.** An instructional program that prepares individuals to manage the business affairs of non-profit corporations, including foundations, educational institutions, associations, and other such organizations, and public agencies and governmental operations. Includes instruction in business management, principles of public administration, principles of accounting and financial management, human resources management, taxation of non-profit organizations, and business law as applied to non-profit organizations.

------ **Public Administration.** (Refer to 44.0401)

52.0299 **Business Administration and Management, Other.** Any instructional program in business and administration not described above.

52.03 **Accounting.** (See 52.0301)

------ **Accounting and Computer Science.** (Refer to ***30.1601***)

52.0301 **Accounting.** An instructional program that prepares individuals to practice the profession of accounting and to perform related business functions. Includes instruction in accounting principles and theory, financial accounting, managerial accounting, cost accounting, budget control, tax accounting, legal aspects of accounting, auditing, reporting procedures, statement analysis, planning and consulting, business information systems, accounting research methods, professional standards and ethics, and applications to specific for-profit, public, and non-profit organizations.

52.0302 **Accounting Technician**. An instructional program that prepares individuals to provide technical administrative support to professional accountants and other financial management personnel. Includes instruction in posting transactions to accounts, record-keeping systems, accounting software operation, and general accounting principles and practices.

52.0399 **Accounting, Other**. Any instructional program in accounting not described above.

52.04 **Administrative and Secretarial Services.** A group of instructional programs that prepare individuals to provide administrative and office support services.

52.0401 **Administrative Assistant/Secretarial Science, General**. An instructional program that generally prepares individuals to perform the duties of administrative assistants and/or secretaries and stenographers. Includes instruction in business communications, principles of business law, word processing and data entry, office machines operation and maintenance, office procedures, public relations, secretarial accounting, filing systems and records management, and report preparation.

52.0402 **Executive Assistant/Secretary.** An instructional program that prepares individuals to perform the duties of special assistants and/or personal secretaries for business executives and top management. Includes instruction in business communications, principles of business law, public relations, scheduling and travel management, secretarial accounting, filing systems and records management, conference and meeting recording, report preparation, office equipment and procedures, office supervisory skills, and professional standards and legal requirements.

52.0403 **Legal Administrative Assistant/Secretary.** An instructional program that prepares individuals to perform the duties of special assistants and/or personal secretaries for lawyers, judges, and legal counsels. Includes instruction in business and legal communications, principles of law, public relations, scheduling and travel management, secretarial accounting, filing systems and records management, conference and meeting recording, report preparation, office equipment and procedures, office supervisory skills, legal terminology and research methods, and professional standards and legal requirements.

------ **Paralegal/Legal Assistant**. (Refer to 22.0103)

52.0404 **Medical Administrative Assistant/Secretary**. An instructional program that prepares individuals to perform the duties of special assistants and/or personal secretaries for physicians, hospital and health services administrators, and other health professionals. Includes instruction in business and medical communications, principles of health services operations, public relations, scheduling and travel management, secretarial accounting, filing systems and records management, conference and meeting recording, report preparation, office equipment and procedures, office supervisory skills, medical terminology, medical legal and business procedures, and professional standards and legal requirements.

------ **Medical Assistant**. (Refer to 51.0801)

52.0405 **Court Reporter**. An instructional program that prepares individuals to record examinations, testimony, judicial opinions, judges' charges to juries, judgments or sentences of courts, or other formal legal proceedings by machine shorthand or other acceptable procedures. Includes instruction in specialized terminology, procedures and equipment, and professional standards and applicable regulations.

------ **Medical Transcription.** (Refer to 51.0708)

52.0406 **Receptionist *and Call Center/Teleservice Operation.*** An instructional program that prepares individuals to perform frontline public relations duties for a business, organization, or answering service. Includes instruction in telephone answering techniques, responding to information requests, keeping caller and/or visitor records, placing business calls, operating telephone switchboards and/or other communications equipment, relaying incoming and interoffice calls, schedule maintenance, and public relations skills.

52.0407 **Information Processing/Data Entry Technician**. An instructional program that prepares individuals to support business information operations by using computer equipment to enter, process, and retrieve data for a wide variety of administrative purposes. Includes instruction in using basic business software and hardware; business computer networking; principles of desktop publishing; preparing mass mailings; compiling and editing spreadsheets; list maintenance; preparing tables and graphs; receipt control; and preparing business performance reports.

52.0408 **General Office/Clerical and Typing Services**. An instructional program that prepares individuals to provide basic administrative support under the supervision of office managers, administrative assistants, secretaries, and other office personnel. Includes instruction in typing, keyboarding, filing, general business correspondence, office equipment operation, and communications skills.

52.0413 Parts, Warehousing and Inventory Management Operations. An instructional program that prepares individuals to provide administrative, technical, and managerial support in the operation of warehouses, control of inventory, parts identification, and the performance of counter services for customers. Includes instruction in record-keeping, equipment operation, database entry, supply logistics, shop operations and math, and customer and supplier relations.

52.0414 Traffic, Customs, and Transportation Clerk/Technician. An instructional program that prepares individuals to perform duties associated with managing revenue-based transportation services, such as toll roads and waterways, and to assist in the dispatch and control of fleet-based traffic for businesses and public services. Includes instruction in such subjects as record-keeping; operation of communications equipment; basic transportation operations management; revenue collection and change-making; and applicable laws, policies, and procedures.

52.0499 **Administrative and Secretarial Services, Other.** Any instructional program in administrative and secretarial services not described above.

52.05 **Business Communications.** (See 52.0501)

52.0501 **Business Communications**. An instructional program that prepares individuals to function in an organization as a composer, editor and proofreader of business or business-related communications.

------ **Public Relations and Organizational Communications**. (Refer to 09.0501)

------ **English Technical and Business Writing**. (Refer to 23.1101)

52.06 **Business/Managerial Economics.** (See 52.0601)

------ **Economics.** (Refer to 45.06 Series)

52.0601 **Business/Managerial Economics.** An instructional program that describes the application of economics principles to the analysis of the organization and operation of business enterprises. Includes instruction in monetary theory, banking and financial systems, theory of competition, pricing theory, wage and salary incentive theory, analysis of markets, and applications of econometrics and quantitative methods to the study of particular businesses and business problems.

52.07 **Enterprise Management and Operation.** A group of instructional programs that prepare individuals to develop, own, and operate businesses.

52.0701 **Enterprise Management and Operation, General.** An instructional program that generally prepares individuals to perform development, marketing and management functions associated with owning and operating a business.

------ **Entrepreneurship**. (Refer to 08.0301)

52.0702 **Franchise Operation**. An instructional program that prepares individuals to manage and operate franchises. Includes instruction in legal requirements, set-up costs and capitalization requirements, financing, and applications to specific franchise opportunities.

52.0799 **Enterprise Management and Operation, Other**. Any instructional program in enterprise management and entrepreneurship not described above.

52.08 **Financial Management and Services.** A group of instructional programs that prepare individuals to provide financial or banking services to individuals or institutions.

52.0801 **Finance, General.** An instructional program that generally prepares individuals to plan, manage, and analyze the financial and monetary aspects and performance of business enterprises, banking institutions, or other organizations. Includes instruction in principles of accounting; financial instruments; capital planning; funds acquisition; asset and debt management; budgeting; financial analysis; and investments and portfolio management.

52.0802 **Actuarial Science.** An instructional program that describes the mathematical and statistical analysis of risk, and their applications to insurance and other business management problems. Includes instruction in forecasting theory, quantitative and non-quantitative risk measurement methodologies, development of risk tables, secondary data analysis, and computer-assisted research methods.

------ **Applied Mathematics**. (Refer to 27.03 Series)

52.0803 **Banking and Financial Support Services.** An instructional program that prepares individuals to perform a wide variety of customer services in banks, insurance agencies, savings and loan companies, and related enterprises. Includes instruction in communications and public relations skills, business equipment operation, and technical skills applicable to the methods and operations of specific financial or insurance services.

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52.0804 **Financial Planning**. An instructional program that prepares individuals to plan and manage the financial interests and growth of individuals and institutions. Includes instruction in portfolio management, investment management, estate planning, insurance, tax planning, strategic investing and planning, financial consulting services, and client relations.

52.0805 **Insurance and Risk Management**. An instructional program that prepares individuals to manage risk in organizational settings and provide risk-aversion services to businesses, individuals, and other organizations. Includes instruction in risk theory, casualty insurance and general liability, property insurance, employee benefits, social and health insurance, loss adjustment, underwriting, and pension planning.

52.0806 **International Finance.** An instructional program that prepares individuals to manage international financial operations and related currency transactions. Includes instruction in international banking, international monetary and financial policy, money and capital markets, foreign exchange, risk analysis, and international cash flow operations.

------ **International Economics.** (Refer to 45.0605)

52.0807 **Investments and Securities**. An instructional program that prepares individuals to manage assets placed in capital markets, and related technical operations. Includes instruction in security analysis, debt and equity analysis, investment strategies, securities markets, computer-assisted research, portfolio management, portfolio performance analysis, and applications to specific investment problems and business situations.

52.0808 **Public Finance**. An instructional program that prepares individuals to manage the financial assets and budgets of public sector organizations. Includes instruction in public trusts and investments; the laws and procedures used to plan, prepare and administer public agency budgets; and the preparation and analysis of public budget projections and policies.

------ **Public Administration.** (Refer to 44.0401)

------ **Public Policy Analysis**. (Refer to 44.0501)

------ **Non-Profit and Public Management**. (Refer to 52.0206)

52.0899 **Financial Management and Services, Other**. Any instructional program in financial management and services not described above.

52.09 **Hospitality Services Management**. (See 52.0901)

52.0901 **Hospitality Administration/Management.** An instructional program that prepares individuals to serve as general managers and directors of hospitality operations on a system-wide basis, including both travel arrangements and promotion and the provision of traveler facilities. Includes instruction in principles of operations in the travel and tourism, hotel and lodging facilities, food services, and recreation facilities industries; hospitality marketing strategies; hospitality planning; management and coordination of franchise and unit operations; business management; accounting and financial management; hospitality transportation and logistics; and hospitality industry policies and regulations.

------ **Parks, Recreation and Leisure Facilities Management.** (Refer to 31.0301)

52.0902 **Hotel/Motel and Restaurant Management.** An instructional program that prepares individuals to manage operations and facilities that provide food and/or lodging services to the traveling public. Includes instruction in hospitality industry principles; supplies purchasing, storage, and control; hotel and restaurant facilities design and planning; hospitality industry law; personnel management and labor relations; financial management; facilities management; marketing and sale promotion strategies; convention and event management; front desk operations; and applications to specific types of hotel, motel, and/or restaurant operations.

------ **Food and Beverage/Restaurant Operations Manager**. (Refer to 12.0504)

52.0903 **Travel-Tourism Management.** An instructional program that prepares individuals to manage travel-related enterprises and related convention and/or tour services. Includes instruction in travel agency management, tour arranging and planning, convention and event planning, travel industry operations and procedures, tourism marketing and promotion strategies, travel counseling, travel industry law, international and domestic operations, and travel and tourism policy.

52.0999 **Hospitality Services Management, Other**. Any instructional program in hospitality service management not described above.

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52.10 **Human Resources Management.** A group of instructional programs that prepare individuals to provide employee services and supporting research for businesses, and other organizations.

52.1001 **Human Resources Management**. An instructional program that prepares individuals to manage the development of human capital in organizations, and to provide related services to individuals and groups. Includes instruction in personnel and organization policy, human resource dynamics and flows, labor relations, sex roles, civil rights, human resources law and regulations, motivation and compensation systems, work systems, career management, employee testing and assessment, recruitment and selection, managing employee and job training programs, and the management of human resources programs and operations.

52.1002 **Labor/Personnel Relations and Studies**. An instructional program that describes the study of employee-management interactions and the management of issues and disputes regarding working conditions and worker benefit packages, and that may prepare individuals to function as labor or personnel relations specialists. Includes instruction in labor history, policies and strategies of the labor movement, union organization, labor-management negotiation, labor law and contract interpretation, labor economics, welfare and benefit packages, grievance procedures, and labor policy studies.

52.1003 **Organizational Behavior Studies.** An instructional program that describes the scientific study of the behavior and motivations of individuals functioning in organized groups, and its application to business and industrial settings. Includes instruction in organization theory, industrial and organizational psychology, social psychology, sociology of organizations, reinforcement and incentive theory, employee relations strategies, organizational power and influence, organization stratification and hierarchy, leadership styles, and applications of operations research and other methodologies to organizational analysis.

------ **Organizational and Industrial Psychology**. (Refer to 42.0901)

52.1099 **Human Resources Management, Other.** Any instructional program in human resources management not described above.

52.11 **International Business**. (See 52.1101).

52.1101 **International Business.** An instructional program that prepares individuals to manage international businesses and/or business operations. Includes instruction in the principles and processes of export sales, trade controls, foreign operations and related problems, monetary issues, international business policy, and applications to doing business in specific countries and markets.

------ **International Agriculture.** (Refer to 01.0701)

------ **International Economics.** (Refer to 45.0605)

------ **International Finance.** (Refer to 52.0806)

------ **International Business Marketing.** (Refer to 52.1403)

52.12 **~~Business~~ *Management* Information *Systems and Business* Data Processing Services.** A group of instructional programs that prepare individuals to provide computer services in business environments, and to manage such services.

52.1201 **~~Business~~ *Management* Information *Systems and Business* Data Processing Services, General.** An instructional program that generally prepares individuals to provide and manage data systems and related facilities for processing and retrieving internal business information; select systems and train personnel; and respond to external data requests. Includes instruction in cost and accounting information systems, management control systems, personnel information systems, data storage and security, business systems networking, report preparation, computer facilities and equipment operation and maintenance, operator supervision and training, and management information systems policy and planning.

52.1202 **Business Computer Programming/Programmer**. An instructional program that prepares individuals to apply business applications, software theory and programming methods to the solution of business data problems. Includes instruction in designing customized software applications, customizing COTS, prototype testing, documentation, input specification, and report generation.

------ **Computer Programming.** (Refer to 11.0201)

52.1203 **Business Systems Analysis and Design.** An instructional program that prepares individuals to analyze business information needs and prepare specifications and requirements for appropriate data system solutions. Includes instruction in information requirements analysis, specification development and writing, prototype evaluation, and network application interfaces.

------ **Computer Systems Analysis.** (Refer to 11.0501)

52.1204 **Business Systems Networking (*LAN/WAN*) and Telecommunications.** An instructional program that prepares individuals to evaluate and resolve business data system hardware and software communication, as well as LAN/WAN requirements. Includes instruction electronic communications networks, telecommunications theory, network theory, hardware and software interfacing, computer network design and evaluation, distance communications systems, computer systems facilities and support design and evaluation, and applications to specific operational needs regarding voice, text, and data communications.

------ **Electrical, Electronics and Communications Engineering.** (Refer to 14.1001)

------ **Electrical, Electronic and Communications Engineering Technology/Technician.** (Refer to 15.0303)

52.1205 **Business Computer Facilities Operator**. An instructional program that prepares individuals to operate mainframe computers and related peripheral equipment in business settings. Includes instruction in mainframe operation and monitoring, peripheral equipment operation and monitoring, disk and tape mounting and storage, printer operations, and related computer facility operations.

------ **Business Information Processing/Data Entry Technician.** (Refer to 52.0407)

52.1299 **~~Business~~** ***Management*** **Information** ***Systems and Business*** **Data Processing Services, Other.** Any instructional program in business information and data processing services not described above.

52.13 **Business Quantitative Methods and Management Science.** A group of instructional programs that describe the application of scientific and mathematical principles to the study of business problems.

52.1301 **Management Science.** An instructional program that describes the application of mathematical modeling, programming, forecasting and operations research techniques to the analysis of problems of business organization and performance. Includes instruction in optimization theory and mathematical techniques, stochastic and dynamic modeling, operations analysis, and the design and testing of prototype systems and evaluation models.

52.1302 **Business Statistics.** An instructional program that describes the application of mathematical statistics to the description, analysis, and forecasting of business data. Includes instruction in statistical theory and methods, computer applications, data analysis and display, long- and short-term forecasting methods, and market performance analysis.

------ **Operations Research.** (Moved to 27.0302)

------ **Mathematical Statistics**. (Refer to 27.0501)

52.1399 **Business Quantitative Methods and Management Science, Other.** Any instructional program in business quantitative methods and management science not described above.

52.14 **Marketing Management and Research.** A group of instructional programs that prepares individuals to provide services for moving goods and services from producer to consumer, and to manage such services.

52.1401 **Business Marketing and Marketing Management.** An instructional program that prepares individuals to undertake and manage the process of developing consumer audiences and moving products from producers to consumers. Includes instruction in buyer behavior and dynamics, principle of marketing research, demand analysis, cost-volume and profit relationships, pricing theory, marketing campaign and strategic planning, market segments, advertising methods, sales operations and management, consumer relations, retailing, and applications to specific products and markets.

------ **General *Sales and Marketing/*~~Wholesaling and Retailing~~ Operations ~~and Skills~~.** (Refer to 08.07)

52.1402 **Marketing Research**. An instructional program that prepares individuals to provide analytical descriptions of consumer behavior patterns and market environments to marketing managers and other business decision-makers. Includes instruction in survey research methods, research design, new product test marketing, exploratory marketing, consumer needs and preferences analysis, geographic analysis, and applications to specific products and markets.

52.1403 **International Business Marketing.** An instructional program that prepares individuals to perform marketing activities in enterprises primarily engaged in exporting or importing goods and services in world markets. Includes instruction in international trade controls, foreign trade operations, locating markets, negotiation practices, monetary issues, and international public relations.

52.1499 **Marketing Management and Research, Other.** Any instructional program in general marketing and marketing research not described above.

52.15 **Real Estate.** (See 52.1501)

52.1501 **Real Estate.** An instructional program that prepares individuals to develop, buy, sell, appraise, and manage real property. Includes instruction in land use development policy, real estate law, real estate marketing procedures, agency management, brokerage, property inspection and appraisal, real estate investing, leased and rental properties, commercial real estate, and property management.

52.16 **Taxation.** (See 52.1601)

52.1601 **Taxation.** An instructional program that prepares individuals to provide tax advice and management services to individuals and corporations. Includes instruction in tax law and regulations, tax record systems, individual and corporate income taxation, tax planning, partnerships and fiduciary relationships, estates and trusts, property depreciation, capital gains and losses, dispositions, transfers, liquidity, valuation, and applications to specific tax problems.

52.99 **Business Management and Administrative Services, Other**. (See 52.9999)

52.9999 **Business Management and Administrative Services, Other**. Any instructional program in business management and administrative services not described above.

CHAPTER II

VOCATIONAL FAMILY AND CONSUMER SCIENCES/CONSUMER AND HOME ECONOMICS

The Consumer and Homemaking vocational education programs listed in this chapter are specifically designed to prepare individuals for the occupation of homemaker and for the dual roles of homemaker and wage earner. These programs may be offered at the elementary, middle and/or high school levels as a part of a comprehensive instructional program.

The Comprehensive Consumer and Homemaking Education program (20.0101) is an instructional program primarily offered at the secondary level that provides general coverage of all of the specific homemaking skills that are separately offered in codes 20.0102 through 20.0199. Comprehensive programs may be offered to adult classes at the secondary level, as well as to traditional students.

The exploratory homemaking program (20.0105) is primarily offered at the middle school or junior high school level or below, and acquaints students with the broad range of offerings available in consumer and homemaking and related occupationally-specific instructional programs.

The specialized instructional programs (codes 20.0102 through 20.0199, excluding 20.0105) are usually offered in grades 11 and 12 to students with particular interests in specific areas, and also to adult learners who seek to acquire or improve specific homemaking skills and knowledge.

------ ***VOCATIONAL FAMILY AND CONSUMER SCIENCES*/HOME ECONOMICS**. (Refer to 20. Series in Chapter I for instructional programs that prepare individuals for paid employment)

------ ***COLLEGIATE FAMILY AND CONSUMER SCIENCES*/HOME ECONOMICS**. (Refer to 19. Series)

20. *VOCATIONAL FAMILY AND CONSUMER SCIENCES*/CONSUMER AND HOME ECONOMICS

20.01 ***Vocational Family and Consumer Sciences*/Consumer and Homemaking Education**. A group of instructional programs that prepares individuals at all education levels for the occupation of homemaking, emphasizing the acquisition of knowledge and the comprehension of attitudes, standards, values and skills relevant to individual and family life. These programs prepare individuals for the multiple roles of homemaker and wage earner.

20.0101 ***Vocational Family and Consumer Sciences*/Consumer and Homemaking Education**. An instructional program that generally prepares individuals for the occupation of homemaking, emphasizing the acquisition of knowledge and the development of attitudes, standards, values, and skills relevant to individual and family life and nurturing. Includes instruction in consumer education, food and nutrition, family living and parenthood education, child growth and development, housing and home management (including resource management), and clothing and textiles. Also, prepares individuals for balancing work and family roles and enhancing employability skills.

20.0102 ***Human Development*/Child Development, Care and Guidance.** An instructional program that prepares individuals to understand children's physical, mental, emotional, and social growth and development. Includes instruction childcare and guidance and actual experience in supervising children.

20.0103 ***Textiles and Apparel*/Clothing and Textiles.** An instructional program that prepares individuals to understand the social, psychological, and physiological aspects of clothing and textiles; the nature, acquisition, and use of clothing and textile products; the selection, construction, maintenance, and alteration of clothing and textile products; and the effect of consumer choices on the individual and family as well as the clothing and textile industry.

20.0104 ***Consumer and Family Resources*/Consumer Education**... An instructional program that prepares individuals to understand the values, needs, wants goals, and resources that enable youth and adults to make rational decisions that contribute to family stability and quality of life. Includes instruction in budgeting and spending plans, use of credit, savings, investments, taxes, consumer buying, and consumer rights and responsibilities.

20.0105 ***Exploratory Occupational Family and Consumer Sciences*/Exploratory Homemaking**. An instructional program that provides individuals the opportunity to explore home economics subject matter areas. Includes instruction in the development of positive self-concepts; understanding personal growth and development; and relationships with peers and family members in becoming contributing members in the home, school, and community.

20.0106 ***Nutrition and Wellness*/Family/Individual Health**.. An instructional program that prepares individuals to understand the related aspects of health and wellness with special emphasis on nutrition, emotional health and physical health; the relationship of the health of an individual to the wellness of the family; the prevention of illness; and the basic care of the ill and convalescent in the home, including the elderly, the young child, and the handicapped.

20.0107 ***Parenting, Interpersonal Relations and Family*/Family Living and Parenthood**. An instructional program that prepares individuals to understand the nature, function, and significance of human relationships within the family/individual units. Includes instruction in the concepts and principles related to various family living conditions, including abuse prevention; the establishment and maintenance of relationships; the preparation for marriage, parenthood, and family life; and the socialization and developmental needs of individuals.

20.0108 ***Foods, Dietetics and Nutrition*/Food and Nutrition**. An instructional program that prepares individuals to understand the principles of nutrition; the relationship of nutrition to health and wellness; the selection, preparation, and care of food; meal management to meet individual and family food needs and patterns of living; food economics and ecology; optimal use of the food dollar; understanding and promoting nutritional knowledge; and the application of related math and science skills.

20.0109 ***Consumer and Family Resources Management*/Home Management**.. An instructional program that prepares individuals to understand the establishment and maintenance of a satisfying home and family life, including decision-making regarding human and non-human resources. Includes instruction in the societal and economic influences on individual and family management; values, goals and standards; family economics; the impact of new technologies on life and work; and the organization of activities in the home as a means of successfully balancing work and family roles.

20.0110 ***Housing, Interiors and Furnishings*/Housing, Home Furnishing and Equipment.** An instructional program that prepares individuals to understand the physical, psychological, and social influences pertaining to the complex housing decisions required for a desirable living environment. Includes instruction in the human and environmental factors influencing the form and use of housing; the varied types of housing; costs, exterior and interior design; home furnishing and equipment; and the selection, use and care of available resources for achieving improved living space to meet individual and family needs.

20.0199 ***Vocational Family and Consumer Sciences*/Consumer and Homemaking Education, Other**. Any instructional program in family and consumer sciences/consumer and homemaking education not described above.

CHAPTER III

TECHNOLOGY EDUCATION/INDUSTRIAL ARTS

Technology Education, formerly called Industrial Arts, is generally taught at the middle school or secondary level as a semester or yearlong credit program. The purpose of Technology Education is to improve students' understanding of and appreciation for industrial processes and related technologies, and does not usually aim at perfecting job-related skills. Postsecondary awards are not given in Technology Education except for teacher education programs. Teacher education programs in this field should be reported under 13.1309, **Technology Teacher Education/Industrial Arts Teacher Education.**

21. **TECHNOLOGY EDUCATION/INDUSTRIAL ARTS**. A summary of groups of instructional programs that provide individuals with knowledge and competencies pertaining to aspects of industry and technology, including a variety of learning experiences, and that assist individuals in making informed and meaningful occupational choices as well as preparation for entry into occupational training or education programs.

21.01 **Technology Education/Industrial Arts**. (See 21.0101)

21.0101 **Technology Education/Industrial Arts**. An instructional program that describes the concepts, processes and systems that are uniquely technological, such as: the evolution, utilization and significance of technology as related to industry; and its organization, personnel, systems, techniques, resources and products. Includes instruction in technological literacy, basic applied science, specific technologies and their applications, and related methods of research and experimentation.

------ **Technology Teacher Education/Industrial Arts Teacher Education**. (Refer to 13.1309)

CHAPTER IV

UNITED STATES RESERVE OFFICERS' TRAINING CORPS PROGRAMS

The 28. Series refers to instructional programs sponsored and regulated by the U.S. Department of Defense that prepare students for entry into the armed services as commissioned reserve or active duty officers. Such programs may carry academic credit, although not usually full credit for individual courses, and are offered in two-year and four-year postsecondary institutions. Completions result in the award of a commission (in four-year programs) or approval for transfer to a four-year R.O.T.C. program (for two-year programs). Satisfactory completion of any R.O.T.C. program does not solely depend upon meeting academic requirements, so that it is possible to complete R.O.T.C. coursework yet fail to obtain a commission. Students who fail to complete a full R.O.T.C. program in which they have enrolled will usually be required to finish their military service contract as enlisted personnel.

28. **UNITED STATES RESERVE OFFICERS' TRAINING CORPS (R.O.T.C).** A summary of groups of instructional programs preparing individuals for entry into the armed forces of the United States as cadets or commissioned officers.

28.01 **Air Force R.O.T.C.** (See 28.0101)

28.0101 **Air Force R.O.T.C./Air Science.** An instructional program that prepares individuals for commissioning as reserve or active duty officers in the United States Air Force, or for entry into an approved senior A.F.R.O.T.C. commissioning program.

28.03 **Army R.O.T.C.** (See 28.0301)

28.0301 **Army R.O.T.C./Military Science.** An instructional program that prepares individuals for commissioning as reserve or active duty officers in the United States Army, or for entry into an approved senior A.R.O.T.C. commissioning program.

28.04 **Navy/Marine Corps R.O.T.C.** (See 28.0401)

28.0401 **Navy/Marine Corps R.O.T.C./Naval Science.** An instructional program that prepares individuals for commissioning as reserve or active duty officers in the United States Navy or Marine Corps, or for entry into an approved senior N.R.O.T.C. commissioning program.

CHAPTER V

PERSONAL IMPROVEMENT AND LEISURE PROGRAMS

The programs in the 32., 33., 34., 35., 36. and 37. Series describe areas of educational competence that equip individuals with knowledge and/or skills related to personal growth and leisure-time pursuits. Most of these instructional programs are designed for adult learners. They are not formal academic or occupationally specific programs and do they result in transferable credit. Awards and completions in these programs are usually informal. The codes and Series for these programs are located in this chapter to avoid potential confusion with codes and Series in Chapter I.

32. **BASIC SKILLS.** A summary of groups of instructional programs that describe fundamental knowledge and skills that individuals need in order to function productively in society.

32.01 **Basic Skills**. (See 32.0101)

32.0101 **Basic Skills, General**. An instructional program that generally describes fundamental knowledge and skills that individuals need in order to function productively in society.

32.0103 **Literacy and Communication Skills.** An instructional program that generally describes fundamental knowledge and skills in reading, writing and speaking that individuals need in order to function productively in society.

32.0104 **Numeracy and Computational Skills**. An instructional program that describes the development of computing and other mathematical reasoning abilities and skills.

32.0105 **Job-Seeking/Changing Skills.** An instructional program that describes the development of skills related to job searches and self-marketing. Includes instruction in assessing one's own capabilities and skills; filling out an application; and handling an interview.

32.0107 **Career Exploration/Awareness Skills.** An instructional program that describes the linkage between individual capabilities and needs and the job market. Includes instruction in the variety and scope of available employment, how to access job information, and techniques of self-analysis.

32.0112 Second Language Learning. An instructional program that describes the development of reading, writing, and speaking abilities a language(s) other than the mother tongue, that are needed to perform day-to-day tasks. Includes instruction in the use of basic communication skills to develop and transmit ideas and thoughts

32.0199 **Basic Skills, Other.** Any instructional program in basic skills not described above.

33. **CITIZENSHIP ACTIVITIES**. A summary of groups of instructional programs that prepare individuals for citizenship, and describe how citizens may engage in civic activities.

33.01 Citizenship Activities. (See 33.0101)

33.0101 **Citizenship Activities, General**. An instructional program that generally prepares individuals for citizenship, and describes how citizens may engage in civic activities.

33.0102 **American Citizenship Education**. An instructional program that prepares individuals to take the oath of United States citizenship and to exercise the attendant rights and responsibilities of citizenship.

33.0103 **Community Awareness**. An instructional program that describes local government and history, current issues, and how individuals can keep abreast of important issues that may affect them.

33.0104 **Community Involvement**. An instructional program that describes how individuals may become actively involved in the social, economic and political issues and events affecting them; and the roles and methods that are available to influence community life and public policy.

33.0105 Canadian Citizenship Education. An instructional program that prepares individuals to take the oath of Canadian citizenship and to exercise the attendant rights and responsibilities of citizenship

33.0199 **Citizenship Activities, Other**. Any instructional program in citizenship activities not described above.

34. **HEALTH-RELATED KNOWLEDGE AND SKILLS**. A summary of groups of instructional programs that describe the promotion of personal and family health.

34.01 **Health-Related Knowledge and Skills**. (See 34.0102-34.0199).

34.0102 **Birthing and Parenting Knowledge and Skills**. An instructional program that describes all facets of the mother's and father's roles in family planning, prenatal preparation and care, the birthing experience, post-natal care and the raising of children.

34.0103 **Personal Health Improvement and Maintenance**. An instructional program that describes the principles, techniques, and methods by which individuals can maintain or improve their overall physical and emotional well-being, as well as work on specific areas of personal health.

34.0104 **Addiction Prevention and Treatment.** An instructional program that describes how individuals can avoid addictive substances and behaviors; the methods by which individuals can be treated for various addictions and related behavior problems; and the knowledge and coping skills needed by relatives and associates of addicted individuals.

34.0199 **Health-Related Knowledge and Skills, Other.** Any instructional program in health-related knowledge and skills not described above.

35. **INTERPERSONAL AND SOCIAL SKILLS**. A summary of groups of instructional programs that describe how to effectively interact with others in private, social and business settings.

35.01 **Interpersonal and Social Skills**. (See 35.0101)

35.0101 **Interpersonal and Social Skills, General**. An instructional program that generally describes how to effectively interact with others in private, social and business settings.

35.0102 **Interpersonal Relationships Skills.** An instructional program that describes how to increase one's ability to establish and maintain mutually satisfactory ties with other human beings.

35.0103 **Business and Social Skills**. An instructional program that describes how to increase one's ability to function effectively in social and business settings where interpersonal communication is required.

35.0199 **Interpersonal Social Skills,** Other. Any instructional program in interpersonal social skills not described above.

36. **LEISURE AND RECREATIONAL ACTIVITIES.** A summary of groups of instructional programs that describe the development of an appreciation for and competency in recreational and leisure-related activities.

36.01 **Leisure and Recreational Activities.** (See 36.0101)

36.0101 **Leisure and Recreational Activities, General**. An instructional program that generally describes the development of an appreciation for and competency in recreational and leisure-related activities.

36.0102 **Handicrafts and Model-Making.** An instructional program that escribes the fashioning of objects of decoration, utility or representation from various materials, including related matters of research, tool use and appreciation.

36.0103 **Board, Card and Role-Playing Games**. An instructional program that describes the rules and techniques of participation and skill-building in competitive activities of skill or chance, such as board games, card games or role-playing activities.

36.0105 **Home Maintenance and Improvement.** An instructional program that describes the knowledge and skills associated with maintaining living space and related equipment and furnishings, as well as do-it-yourself repairs and improvement projects of varying complexity.

36.0106 **Nature Appreciation.** An instructional program that describes how to increase one's understanding and knowledge of the natural environment in which we live, as well as techniques of wildlife observation and management.

36.0107 **Pet Ownership and Care.** An instructional program that describes how to increase one's ability to care for domesticated animals kept for pleasure or work.

36.0108 **Sports and Exercise.** An instructional program that describes the rules and techniques of participation and skill building in competitive physical activities, as well as non-competitive physical fitness programs.

36.0109 **Travel and Exploration.** An instructional program that describes particular geographic areas or phenomena, and provides opportunities for organized trips or tours, including related knowledge and skills.

36.0110 **Art.** An instructional program that describes the techniques and methods of creative self-expression in visual or plastic media, such as painting or sculpture.

36.0111 **Collecting.** An instructional program that describes the knowledge and techniques necessary for acquiring and maintaining personal collections of objects, such as autographs, stamps, models, specimens, vehicles and antiques.

36.0112 **Cooking and Other Domestic Skills.** An instructional program that describes the knowledge and skills related to food buying and preparation, home decoration, sewing and other domestic activities, either as hobbies or as routine tasks.

36.0113 **Computer Games and Programming Skills**. An instructional program that describes the knowledge and skills associated with creating, acquiring, maintaining and using computer hardware and software, as well as the playing of computer-based games.

36.0114 **Dancing.** An instructional program that describes the knowledge and skills related to recreational dance, such as square dancing, ballroom dancing, classical or modern dance.

36.0115 **Music.** An instructional program that describes the knowledge and skills associated with personal music appreciation, the playing of a musical instrument, singing or recreational composition.

36.0116 **Reading.** An instructional program that describes the activity of reading for pleasures, either alone or as part of a group experience.

36.0117 **Theatre**. An instructional program that describes the knowledge and skills associated with participation in amateur theatrical productions, drama appreciation, and writing amateur plays.

36.0118 **Writing**. An instructional program that describes the knowledge and skills related to creative writing and poetry composition for pleasure or profit, including methods of publication.

36.0119 **Aircraft Pilot (Private).** An instructional program that prepares individuals to fly aircraft for personal use, and qualifies individuals to sit for the FAA pilot's license examination. Includes instruction in principles of aircraft design and performance; aircraft flight systems and controls; flight crew operations and procedures; radio communications and navigation procedures and systems; airways safety and traffic regulations; and governmental rules and regulations pertaining to piloting aircraft (Moved from 49.0107)

36.0199 **Leisure and Recreational Activities, Other.** Any instructional program in leisure and recreational activities not described above.

37. **PERSONAL AWARENESS AND SELF-IMPROVEMENT** A summary of groups of instructional programs that describe how to develop improved self-awareness avoid stressful behavior and improve decision-making skills.

37.01 **Personal Awareness and Self-Improvement.** (See 37.0101-37.9999)

37.0101 **Self-Awareness and Personal Assessment.** An instructional program that describes how to be aware of one's feelings, to use methods of assessing one's personal attributes and to be aware of how others perceive oneself.

37.0102 **Stress Management and Coping Skills.** An instructional program that describes the knowledge and skills useful in avoiding stressful situations and managing them when they occur, including dealing with complex and long-term stressful relationships.

37.0103 **Personal Decision-Making Skills.** An instructional program that describes how to develop individuals' abilities to assess decisions affecting their lives and to make life choices consistent with needs and beliefs.

37.0104 **Self-Esteem and Values Clarification.** An instructional program that describes the development of personal philosophies and ideas of self-worth, and how to apply such knowledge and skills in everyday circumstance.

37.0199 **Personal Awareness and Self-Improvement, Other**. Any instructional program in personnel awareness and self-improvement not described above.

CHAPTER VI

DENTAL, MEDICAL AND VETERINARY RESIDENCY PROGRAMS

Residency programs are designed to prepare medical doctors (M.D.), or osteopaths (DO), dentists (DDS, D.M.D.), and veterinarians (D.V.M.) for certification as practitioners of recognized specialties in their respective professions. These programs are approved and accredited by designated professional associations and require from one to five years to complete, depending on the program. Medical residencies usually require completion of an internship after the M.D. degree for program entry, while requirements vary for dentistry and veterinary programs. These programs are offered by professional schools, independent teaching hospitals and clinics, and other approved facilities.

Data on residency program enrollments and completions only partially collected and analyzed by the United States Department of Education. Should a residency program also result in an academic degree compietion, such as an MS or Ph.D., that would properly by reported under one of the Clinical Sciences codes (51.0501, 51.1401, or 51.2501) in Series 51., rather than in a residency code located in Chapter VI.

51.28. **Dental Residency Programs.** A group of instructional programs that prepare dentists in advanced clinical work in special areas of dental practice. Programs may lead to examination for board certification.

------ **Dentistry (DDS, D.M.D.).** (Refer to 51.04 Series)

------ **Dental Clinical Sciences/Graduate Dentistry (MS, Ph.D.).** (Refer to 51.05 Series)

51.2801 **Dental/Oral Surgery Specialty.** A residency training program that prepares dentists and medical surgeons in advanced clinical training and practice in the surgery of the oral cavity and jaws, including the removal of cancerous and other diseased tissue, removal of teeth, and reconstruction of the jaw and related facial structure.

51.2802 **Dental Public Health Specialty.** A residency-training program that prepares dentists in the formulation and delivery of public preventive and curative dental health services.

51.2803 **Endodontics Specialty.** A residency training program that prepares dentists in the etiology, diagnosis, prevention, and treatment of conditions that affect the dental and other periodontal tissues, including pulp canal therapy and root canal therapy.

51.2804 **Oral Pathology Specialty.** A residency training program that prepares dentists in the functional and structural changes that affect the oral cavity, including diagnosis of diseases, abnormalities and tumors.

51.2805 **Orthodontics Specialty.** A residency-training program that prepares dentists in the principles and techniques involved in the prevention and correction of dental malocclusions and oral cavity anomalies.

51.2806 **Pedodontics Specialty**. A residency training program that prepares dentists in the principles and techniques of diagnosing and treating the dental and other oral cavity conditions of children.

51.2807 **Periodontics Specialty.** A residency training program that prepares dentists in the nature and treatment of diseases which affect the mucous membranes, gums and other soft tissues within the oral cavity.

51.2808 **Prosthodontics Specialty.** A residency training program that prepares dentists in the principles and techniques of constructing oral prostheses, and the restoration and maintenance of oral function by the replacement of missing teeth and other oral structures with such artificial devices.

51.2899 **Dental Residency Program, Other**. Any Dental Residency Specialty program not described above.

51.29 **Medical Residency Programs.** A group of instructional programs that prepare physicians in advanced clinical work in special areas of medical practice. Programs may lead to examination for board certification.

------ **Medicine (M.D.).** (Refer to 51.12 Series)

------ **Medical Basic Sciences**. (Refer to 51.13 Series)

------ **Medical Clinical Sciences (MS, Ph.D.).** (Refer to 51.14 Series)

------ **Osteopathic Medicine (DO).** (Refer to 51.19 Series)

51.2901 **Aerospace Medicine Residency.** A residency training program that prepares physicians in the health care of operating crews and passengers of air and space vehicles, plus support personnel. Includes instruction in special conditions of physical and psychological stress, emergency medical procedures, adaptive systems and artificial environments.

51.2902 **Allergies and Immunology Residency.** A residency training program that prepares physicians in the delivery of skilled medical care to patients suffering from allergic, asthmatic and immunologic diseases. Requires completion of a prior program in internal medicine or pediatrics.

51.2903 **Anesthesiology Residency.** A residency training program that prepares physicians in the application of anesthesia for general and specialized surgery and obstetrics, critical patient care and the care of pain problems. Includes instruction in surgical procedures, current monitoring procedures, fluid therapy, pain management, diagnostic and therapeutic procedures outside the operating room and operating room safety. (See also 51.2910)

51.2904 **Blood Banking Residency.** A residency training program that prepares physicians in the medical, technical, research and administrative aspects of operating blood banks. Includes instruction in transfusion and transplantation procedures, logistics and the training and supervision of blood bank technicians.

51.2905 **Cardiology Residency.** A residency training program that prepares physicians in the natural history of cardiovascular disorders in adults and the diagnosis and treatment of diseases of the heart and blood vessels. Includes instruction in coronary care, diagnostic testing and evaluation, invasive and non-invasive therapies and pacemaker follow-up. Requires prior completion of a program in internal medicine. (See also 51.2945)

51.2906 **Chemical Pathology Residency.** A residency training program that prepares physicians in the development, operation and quality control of chemical pathology laboratories and the provision of support and consultative services to other physicians. Includes instruction in instrumentation, analysis, data processing and administration. Requires prior completion of a program in medical pathology.

51.2907 **Child/Pediatric Neurology Residency.** A residency training program that prepares physicians in the diagnosis and management of neurological disorders of the newborn infant, early childhood and adolescence. Requires training in adult neurology and prior partial completion of a program in pediatrics.

51.2908 **Child Psychiatry Residency.** A residency training program that prepares physicians in the diagnosis and treatment of mental, emotional and behavioral disorders of infancy, early childhood and adolescence. Requires completion of the initial segment of a program in psychiatry.

51.2909 **Colon and Rectal Surgery Residency.** A residency training program that prepares physicians in the surgical care of patients with anorectal and colonic diseases. Also includes instruction in diagnostic and therapeutic colonoscopy. Requires prior completion of a program in general surgery.

51.2910 **Critical Care Anesthesiology Residency.** A residency training program that prepares physicians in the administration of anesthesia to patients with acute, chronic or long-term illness and who have multiple organ system derangements. Includes instruction in high-risk and trauma procedures, respiratory therapy and biomedical engineering. Requires prior completion of a program in anesthesiology.

51.2911 **Critical Care Medicine Residency.** A residency training program that prepares physicians in the management of care for patients with acutely life-threatening conditions which may include multiple organ failure. Includes instruction in the management of critical care units, emergency procedures and post-discharge care of former critical care patients. Requires prior completion of a program in internal medicine.

51.2912 **Critical Care Surgery Residency.** A residency training program that prepares physicians in surgical procedures for patients with multiple trauma, critical illness, patients on life support and elderly or very young patients with disease complications. Requires full or partial prior completion of a program in general surgery or another surgical specialty.

51.2913 **Dermatology Residency.** A residency training program that prepares physicians in the delivery of specialized care to patients with diseases of the skin, hair, nails and mucous membranes. Includes instruction in dermatologic surgical procedures, cutaneous allergies, sexually transmitted diseases, and diagnostic and therapeutic techniques.

51.2914 **Dermatopathology Residency.** A residency training program that prepares physicians in the clinical and microscopic diagnosis and analysis of skin diseases and disorders. Includes instruction in laboratory administration and the supervision and training of support personnel. Requires prior completion of a program in dermatology or pathology.

51.2915 **Diagnostic Radiology Residency.** A residency training program that prepares physicians in the diagnostic use of roentgen, isotopic, ultrasound and other radiant energy imaging techniques. Includes instruction in intervention procedures, safety and imaging science and technology. (See also 51.2936, 51.2958, and 51.2959)

51.2916 **Emergency Medicine Residency.** A residency training program that prepares physicians in the methods, procedures, and techniques of providing and managing immediate health care services. Includes instruction in the initial recognition, stabilization, evaluation and care of the acutely ill or injured patient; patient follow-up and Referral; management of prehospital care; training and supervision of emergency medical personnel; emergency department management; medicolegal and ethical issues; and disaster planning.

51.2917 **Endocrinology and Metabolism Residency.** A residency training program that prepares physicians in the diagnosis and treatment of diseases and disorders of the endocrine glands and metabolic system. Includes instruction in the diagnosis and care of diabetes, hypoglycemia, hormone disorders and sexual dysfunction. Requires prior completion of a program in internal medicine. (See also 51.2946)

51.2918 **Family Medicine Residency.** A residency training program that prepares physicians in the provisions of regular and long-term care to individuals and family members. Includes instruction in comprehensive care and specialist Referral, basic surgery, emergency medical procedures, and diagnostic imaging and practice management.

51.2919 **Forensic Pathology Residency.** A residency training program that prepares physicians in the performance of medical autopsies, the analysis of human remains and crime scenes, and the legal follow-up and responsibilities of public pathologists. Requires prior completion of a program in pathology.

51.2920 **Gastroenterology Residency**. A residency training program that prepares physicians in the diagnosis and treatment of patients with digestive and other gastrointestinal disorders. Includes instruction in surgical procedures, cancer of the digestive system, nutrition and malnutrition and counseling the behavioral adjustment of patients with chronic problems. Requires prior completion of a program in internal medicine.

51.2921 **General Surgery Residency**. A residency training program that prepares physicians in the care and treatment of diseases and disorders via invasive procedures and the etiology, pathogenesis, diagnosis and management of physical disorders. Includes instruction in clinical and operative skills, pre-operative and post-operative care, trauma management and endoscopic techniques. (See also 51.2912, 51.2923, 51.2933, 51.2942, 51.2950, 51.2953, 51.2962, and 51.2964)

51.2922 **Geriatric Medicine Residency.** A residency training program that prepares physicians in the care and management of elderly patients in acute, ambulatory, community and long-term care settings, and the treatment of diseases and conditions associated with the aging process. Includes instruction in ethical and legal issues, behavioral aspects of illness, socioeconomic factors in care and rehabilitation therapies. Requires prior completion of a program in family medicine or internal medicine.

51.2923 **Hand Surgery Residency**. A residency training program that prepares physicians in the investigation, preservation and restoration by medical, surgical or physical methods of all structures of the upper extremity which directly affect the form and function of the limb, wrist and hand. Requires prior completion of a program in orthopedic surgery, plastic surgery or general surgery.

51.2924 **Hematology Residency.** A residency training program that prepares physicians in the mechanisms and therapy of diseases of the blood, including patient management, diagnostic tests, biopsies and other procedures. Requires prior completion of a program in internal medicine.

51.2925 **Hematological Pathology Residency.** A residency training program that prepares physicians in the laboratory and analytical procedures for studying all facets of hematologic and coagulation disorders. Includes instruction in the management of hematology laboratories. Requires prior completion of a program in pathology.

51.2926 **Immunopathology Residency.** A residency training program that prepares physicians in the diagnosis, treatment and laboratory management of immunologic diseases. Includes instruction in diagnostic surgical pathology, management of organ transplantation and immunotherapy. Requires prior completion of a program in pathology.

51.2927 **Infectious Disease Residency.** A residency training program that prepares physicians in the natural history, prevention and treatment of major infectious diseases, including sexually transmitted diseases, and the long-term management of patients. Includes instruction in epidemiology, identification and specimen collection techniques, and quality assurance and cost containment. Requires prior completion of a program in internal medicine.

51.2928 **Internal Medicine Residency.** A residency training program that prepares physicians in the provision of general medical services to adult patients with a wide range of non-surgical clinical problems. Includes instruction in behavioral aspects of diseases, patient and family counseling and practice management.

51.2929 **Laboratory Medicine Residency.** A residency training program that prepares physicians in the principles and practices of applied medical research and related techniques, equipment, data systems and research design. Includes instruction in the management of medical laboratories in research and health care facilities.

51.2930 **Musculoskeletal Oncology Residency**. A residency training program that prepares physicians in the diagnosis and treatment of musculoskeletal neoplasm, and the application of cancer therapy regimes.

51.2931 **Neonatal-Perinatal Medicine Residency.** A residency training program that prepares physicians in the physiology of the normal neonate, the pathophysiology of the sick infant and the diagnosis and management of problems of the newborn infant. Requires prior completion of a program in pediatrics and obstetrics.

51.2932 **Nephrology Residency.** A residency training program that prepares physicians in the pathogenesis, natural history and management of congenital and acquired diseases of the kidney and urinary tract and renal diseases associated with systemic disorders. Includes instruction in organ transplantation and dialysis therapy. Requires prior completion of a program in internal medicine. (See also 51.2048)

51.2933 **Neurological Surgery/Neurosurgery Residency.** A residency training program that prepare physicians in the diagnosis, evaluation and treatment of disorders of the central, peripheral and autonomic nervous systems, including their supporting systems and vascular supply; and the evaluation and treatment of pathological processes which modify function or activity of the nervous system, including the hypophysis. Includes instruction in critical care management and rehabilitation. Requires prior partial completion of a program in general surgery and another surgical specialty.

51.2934 **Neurology Residency.** A residency training program that prepares physicians in the diagnosis and non-surgical treatment of diseases and abnormalities affecting the nervous system and nerve tissue in adults. Requires prior partial completion of a program in internal medicine. (See also 51.2907)

51.2935 **Neuropathology Residency.** A residency training program that prepares physicians in the laboratory analysis of nerve tissues and the clinical diagnosis of neurological and neuromuscular diseases. Includes instruction in nerve biopsies and necropsies. Requires prior completion of a program in pathology.

51.2936 **Nuclear Medicine Residency.** A residency training program that prepares physicians in the diagnostic, therapeutic and investigational use of radionuclides. Includes instruction in imaging and non-imaging technologies and the design and development instrumentation, procedures and pharmaceutical. Requires prior partial completion of a program in radiology, pathology or internal medicine.

51.2937 **Nuclear Radiology Residency.** A residency training program that prepares physicians in the imaging by external detection of radionuclides and/or biodistribution by external detection of radionuclides for diagnosis of disease. Requires prior partial completion of a program in diagnostic radiology.

51.2938 **Obstetrics and Gynecology Residency.** A residency training program that prepares physicians in the diagnosis, prevention and treatment of diseases of women, especially those affecting the reproductive system, and the comprehensive care and treatment of women before, during and after childbirth.

51.2939 **Occupational Medicine Residency.** A residency training program that prepares physicians in the maintenance of the health of workers, the ability to perform work, the arrangements of work, and the physical and chemical environments of the workplace. Includes instruction in data collection and management and the administration and regulation of occupational medical services.

51.2940 **Oncology Residency.** A residency training program that prepares physicians in the etiology, epidemiology, diagnosis, treatment and therapeutic management of cancers and related clinical neoplastic diseases. Includes instruction in rehabilitation, supportive care and the administration of tumor boards. Requires prior completion of a program in internal medicine. (See also 51.2930, 51.2947 and 51.2958)

51.2941 **Ophthalmology Residency.** A residency training program that prepares physicians in the diagnosis, prevention treatment of ophthalmic diseases and disorders, and ocular pathology procedures. Includes instruction in eye surgery.

51.2942 **Orthopedics/Orthopedic Surgery Residency.** A residency training program that prepares physicians in the investigation, preservation, and restoration of the form and function of the extremities, spine and associated structures by medical, surgical and physical methods. Requires prior partial completion of a program in general surgery, internal medicine or pediatrics. (See also 51.2949)

51.2943 **Otolaryngology Residency**. A residency training program that prepares physicians in the recognition and medical management of diseases, congenital anomalies, disorders and traumas of the head and neck, the air and food passages, and the organs of hearing and speech. Includes instruction in regional surgery. Requires prior partial completion of a program in general surgery.

51.2944 **Pathology Residency.** A residency training program that prepares physicians in the clinical laboratory analysis and diagnosis of disease and anatomic abnormalities. Includes instruction in performing general autopsies, forensic medicine, laboratory management and quality control. (See also 51.2904, 51.2914, 51.2919, 51.2925, 51.2935 and 51.2959)

51.2945 **Pediatric Cardiology Residency.** A residency training program that prepares physicians in the diagnosis and management of diseases and disorders of the cardiovascular and cardiopulmonary systems of infants, children and adolescents. Includes instruction in related public health and community medicine issues. Requires prior completion of a program in pediatrics.

51.2946 **Pediatric Endocrinology Residency**. A residency training program that prepares physicians in the diagnosis and management of endocrine diseases and the regulation of hormone balance in childhood and adolescence. Requires prior completion of a program in pediatrics.

51.2947 **Pediatric Hemato-Oncology Residency.** A residency training program that prepares physicians in the diagnosis and management of hematologic disorders and malignant diseases, including blood and bone marrow function, in infancy, childhood and adolescence. Requires prior completion of a program in pediatrics.

51.2948 **Pediatric Nephrology Residency.** A residency training program that prepares physicians in the diagnosis and management of infants, children and adolescents with renal and genito-urinary problems, hypertension and disorders of body fluid physiology. Requires prior completion of a program in pediatrics.

51.2949 **Pediatric Orthopedics Residency.** A residency training program that prepares physicians in the diagnosis, surgical and non-surgical treatment, and management of musculoskeletal diseases, abnormalities and trauma in infants, children and adolescents. Requires prior completion of a program in orthopedic surgery.

51.2950 **Pediatric Surgery Residency.** A residency training program that prepares physicians in the diagnosis, evaluation and surgical treatment of diseases, disorders and trauma in infants and children. Requires prior completion of a program in general surgery.

51.2951 **Pediatrics Residency.** A residency training program that prepares physicians in the comprehensive care and treatment of all aspects of human growth and development from conception through fetal life, infancy, childhood and adolescence, including preventive and therapeutic regimes. Includes instruction in behavioral aspects of illness, related family and community medicine issues, and emergency and critical care procedures. (See also 51.2945, 51.2946, 51.2947, 51.2948, 51.2949 and 51.2950)

51.2952 **Physical and Rehabilitation Medicine Residency.** A residency training program that prepares physicians in the diagnosis, etiology, treatment, prevention and rehabilitation of neuromusculo-skeletal, cardiovascular, pulmonary and other system disorders common to patients of both sexes and all ages. Includes instruction in physical examinations, design and prescription of rehabilitation strategies and the supervision of rehabilitation teams.

51.2953 **Plastic Surgery Residency.** A residency training program that prepares physicians in the repair, replacement and reconstruction of defects of form and function of the integument and its underlying musculoskeletal system, with emphasis on the craniofacial structures, the oropharynx, the hand, the breast and the external genitalia. Includes instruction in aesthetic as well as reconstructive surgery. Requires prior completion of a program in general surgery.

51.2954 **Preventive Medicine Residency.** A residency training program that prepares physicians in the investigation of and intervention in health and disease problems of communities and defined population groups, and the simulation of behaviors that promotes good health. Includes instruction in biostatistics, epidemiology, environmental control, toxicology and the planning and administration of health programs and services. Requires prior or concurrent completion of a program in public health.

51.2955 **Psychiatry Residency.** A residency training program that prepares physicians in the diagnosis, treatment, and prevention of mental, emotional, behavioral and neurological disorders. Includes instruction in psychotherapy, family counseling, Referral, clinical diagnosis, and practice management. Requires prior partial completion of a program in neurology and internal medicine, family medicine or pediatrics.

51.2956 **Public Health Medicine Residency**. A residency training program that prepares physicians in the prevention, control and treatment of communicable and chronic diseases in communities and defined population groups, with emphasis on the administrative management of health care, sanitation and applied research services.

51.2957 **Pulmonary Disease Residency.** A residency training program that prepares physicians in pulmonary physiology and the treatment of lung diseases, pulmonary malignancies, related vascular diseases, respiratory disorders, diagnostic and therapeutic procedures, and pulmonary pathology. Requires prior completion of a program in internal medicine.

51.2958 **Radiation Oncology Residency.** A residency training program that prepares physicians in the use of ionizing radiation to treat patients with cancer and other diseases. Includes instruction in treatment planning, instrument design and operation, radiation physics and radiobiology.

51.2959 **Radioisotopic Pathology Residency.** A residency training program that prepares physicians in the use of radionuclides in the study of body fluids, excreta, or tissues quantified outside the body. Includes instruction in laboratory management and safety, quality control, instrumentation, isotope storage and in vitro analyses. Require prior completion of a program in pathology.

51.2960 **Rheumatology Residency**. A residency training program that prepares physicians in the diagnosis and treatment of patients with acute and chronic rheumatic diseases, diffuse connective tissue diseases, systemic and metabolic diseases and infections and complications following surgery. Requires prior completion of a program in internal medicine.

51.2961 **Sports Medicine Residency.** A residency training program that prepares physicians in the pathology and biomechanics of athletic injuries and the effects of injury on the athlete, including both physical and psychological manifestations. Includes instruction in acute and chronic patient supervision, therapy and rehabilitation, and diagnostic procedures. Requires prior completion of a program in orthopedic surgery.

51.2962 **Thoracic Surgery Residency.** A residency training program that prepares physicians in the evaluation and surgical treatment of pulmonary, esophageal, mediastinal, chest wall, diaphragmatic and cardiovascular disorders. Includes instruction in bronchoscopy and esophagoscope. Requires prior completion of a program in general surgery.

51.2963 **Urology Residency.** A residency training program that prepares physicians in the diagnosis and treatment of diseases of the genitourinary tract in men and women, including renal transplantation, renal-vascular disease, oncology, infertility and endocrinology, stone disease and aerodynamics. Requires prior partial completion of a program in general surgery.

51.2964 **Vascular Surgery Residency**. A residency training program that prepares physicians in the surgical treatment of diseases and disorders of the arterial, venous and lymphatic circulatory systems and of the heart and thoracic aorta. Requires prior completion of all or a portion of a program in general surgery

51.2965 Adult Reconstructive Orthopedics (Orthopedic Surgery) (Definition to be developed – suggestions welcome)

51.2966 Chemical Pathology Residency (Definition to be developed – suggestions welcome)

51.2967 Child Neurology Residency (Definition to be developed – suggestions welcome)

51.2968 Cytopathology Residency (Definition to be developed – suggestions welcome)

51.2969 Diagnostic Laboratory Immunology Residency (Definition to be developed – suggestions welcome)

51.2970 Geriatric Medicine Residency (Internal Medicine) (Definition to be developed – suggestions welcome)

51.2971 Pediatrics Urology (Definition to be developed – suggestions welcome)

51.2972 Physical and Rehabilitation Medicine Residency (Definition to be developed – suggestions welcome)

51.2973 Preventive Medicine Residency – Public Health (Definition to be developed – suggestions welcome)

51.2974 Transitional Year Residency (Definition to be developed – suggestions welcome)

51.2975 Spinal Surgery Residency (Orthopedic Surgery) (Definition to be developed – suggestions welcome)

51.2999 **Medical Residency Programs, Other**. Any residency program in medicine not described above.

51.30 **Veterinary Residency Programs** A group of instructional programs that prepare veterinarians in advanced clinical work in special areas of veterinary practice. Programs may lead to examination for board certification.

------ **Veterinary Medicine (D.V.M.).** (Refer to 51.24 Series)

51.3001 **Veterinary Anesthesiology**. A residency training program that prepares veterinarians in the application of anesthesia for general and specialized surgery and obstetrics, critical animal care and the care of pain problems. Includes instruction in surgical procedures, current monitoring procedures, fluid therapy, pain management, diagnostic and therapeutic procedures outside the operating room, and operating room safety.

51.3002 **Veterinary Dentistry.** A residency training program that prepares veterinarians in the application of dental care procedures to the teeth, eating surfaces, and oral cavities of animals. Includes instruction in the prevention, diagnosis, and treatment of diseases and abnormalities of animal teeth and gums and related parts of the oral cavity; and related anatomical and physiological principles.

51.3003 **Veterinary Dermatology**. A residency training program that prepares veterinarians in the delivery of specialized care to animals with diseases of the skin, scales, feathers, hair, nails and mucous membranes. Includes instruction in dermatologic surgical procedures, cutaneous allergies, and diagnostic and therapeutic techniques.

51.3004 **Veterinary Emergency and Critical Care Medicine.** A residency training program that prepares veterinarians in the emergency treatment and management of care for animals with acutely life-threatening conditions which may include multiple organ failure. Includes instruction in the management of critical care units, emergency procedures, and long-term care of critically diseased animals.

51.3005 **Veterinary Internal Medicine.** A residency training program that prepares veterinarians in the provision of general medical services to animals with a wide range of non-surgical clinical problems. Includes instruction in behavioral aspects of diseases, animal diagnosis, animal aging, and Referral procedures.

51.3006 **Laboratory Animal Medicine.** A residency training program that prepares veterinarians in the principles and practices of applied veterinary research and related techniques, equipment, data systems and research design. Includes instruction in the management of veterinary and other animal research laboratories and health care facilities.

51.3007 **Veterinary Microbiology.** A residency training program that prepares veterinarians in clinical applications of research on harmful microorganisms, including viruses, and of the disease processes they induce in animals.

51.3008 **Veterinary Nutrition.** A residency training program that prepares veterinarians to apply research on the chemical nature of food substances; the processes by which animals ingest, digest, absorb, transport, utilize and excrete food and nutrients; and their relation to animal behavior and health.

51.3009 **Veterinary Ophthalmology.** A residency training program that prepares veterinarians in the diagnosis, prevention, and treatment of ophthalmic diseases and disorders in animals, and related ocular pathology procedures. Includes instruction in animal eye surgery.

51.3010 **Veterinary Pathology.** A residency training program that prepares veterinarians in the clinical laboratory analysis and diagnosis of diseased animal tissues and anatomic abnormalities. Includes instruction in performing general autopsies, forensic medicine, laboratory management and quality control.

51.3011 **Veterinary Practice.** A residency training program that prepares veterinarians in the provision of regular and long-term care to animals, health services to owners, and the management of independent veterinary practices. Includes instruction in comprehensive care and specialist referral, basic surgery, emergency medical procedures, and diagnostic imaging.

51.3012 **Veterinary Preventive Medicine.** A residency training program that prepares veterinarians in the investigation of and intervention in health and disease problems of animal and related human communities; comparative medicine; and animal public health. Includes instruction in biostatistics, epidemiology, environmental control, toxicology and the planning and administration of animal health programs and services.

51.3013 **Veterinary Radiology.** A residency training program that prepares veterinarians in the use of radiologic imaging and therapies to diagnose and treat animal diseases and health problems. Includes instruction in the use and handling of equipment for radionuclides detection and application.

51.3014 **Veterinary Surgery.** A residency training program that prepares veterinarians in the care and treatment of animal diseases and disorders via invasive procedures and the etiology, pathogenesis, diagnosis and management of physical disorders. Includes instruction in clinical and operative skills, pre-operative and post-operative care, trauma management, endoscopic techniques, and applications to large and small animal medicine.

51.3015 **Theriogenology.** A residency training program that prepares veterinarians in the diagnosis, prevention and treatment of diseases and health problems affecting the reproductive systems of animals, and the comprehensive care and treatment of parent animals, animal fetuses and newborn or newly hatched animals throughout the gestation period.

51.3016 **Veterinary Toxicology.** A residency training program that prepares veterinarians in the clinical application of research on the nature and extent of adverse effects of synthetic and naturally occurring chemical substances on animals. Includes instruction in chemical mechanisms and the specialties of reproductive, developmental, genetic, forensic, inhalation and neurobehavioral toxicology.

51.3017 **Zoological Medicine.** A residency training program that prepares veterinarians in the specialized treatment and care of zoo animals, performing animals, and animals living in the wild. Includes instruction in the principles and procedures used in the observation, diagnosis, care and treatment of illness, disease, injury, deformity, or other anomalies in non-domesticated animals.

51.3099 **Veterinary Residency Programs, Other.** Any residency training program in veterinary medicine not described above.

CHAPTER VII

HIGH SCHOOL/SECONDARY DIPLOMA AND CERTIFICATE PROGRAMS

The codes listed in Chapter VII describe formal instructional programs of study at the high school level only. Data on completions and awards in the Series 53. Codes are annually collected and analyzed by the United States Department of Education.

High school/secondary awards that do not reflect completion of an instructional program, such as certificates of attendance, are not described in the Classification of Instructional Programs.

Regular High School Diplomas, regardless of type, represent the successful completion of 16 or more prescribed Carnegie Units of instruction. (Each Carnegie Unit equals one academic year of instruction in a specific subject matter area, at approximately one instructional hour per school day.)

Depending on state policy, secondary students enrolled in vocational and other programs may receive more than one completion award. In states offering separate vocational diplomas, individuals receiving recognized vocational diplomas will also have completed a regular secondary academic program, and will be simultaneously certified in both. Other states do not offer a separate secondary vocational diploma, but either offers a certificate of completion in specified vocational programs or program areas, or make no distinction at all.

Proficiency in specific academic subject matter areas is also certified in some states by the simultaneous award of a regular secondary diploma and certification of competence in one or more specific programs or program areas. Other states award separate college preparatory diplomas to those students completing specified credits in academic subjects. In addition, a few state award honors or regents diplomas that certifies outstanding scholastic performance in either academic or vocational programs.

State policy also determines the treatment of completions and awards in the area of special education. Under the authority of PL 94-142, all handicapped students in the United States under age 21 must have an Individualized Education Plan (IEP), which specifies the knowledge and skills that the student is expected to achieve. Some states implement this National requirement by awarding a regular secondary diploma to students who successfully complete their IEP requirements, without regard to the standard Carnegie Unit requirements of such diplomas. Other states award certificates of IEP completion along with attendance certificates, but not diplomas. Still others do not formally recognize IEP completions, and do not separately distinguish special education students receiving any kind of award.

It is also possible to be certified to have met diploma requirements without having attended a traditional or recognized secondary school, or having completed a program, either by examination or by official acceptance of credentials earned outside the United States.

53. **HIGH SCHOOL/SECONDARY DIPLOMAS AND CERTIFICATES**. A summary of groups of instructional programs that describe the requirements for high school/secondary graduation.

53.01 **High School/Secondary Diplomas**. A group of instructional programs that describe prescribed programs of study leading to high school/secondary graduation.

53.0101 **Regular/*General* High School Diploma *and Secondary/Senior High School Graduation/Completion Diploma/Certificate; Grade 12/Division IV Standing (Saskatchewan).*** An instructional program that describes prescribed minimum requirements specified by a state, province, or other jurisdiction for completion of, and graduation from, a undifferentiated regular secondary school course of study representing 12 academic years of schooling intended for school-age students.

53.0102 **College/*University* Preparatory *and Advanced* High School/*Secondary School* Diploma; *Diplôme d'études secondaires-Enseignement général (DES-EG)*.** An instructional program that describes prescribed requirements, specified by a state, province, or other jurisdiction, for completion of, and graduation from, a secondary school program of academic subject matter designed to meet typical college and university entrance requirements.

53.0103 **Vocational High School Diploma *and Secondary Business/Vocational-Industrial/Occupational Diploma; Diplôme d'études secondaires-Enseignement professionnel (DES-EP).*** An instructional program that describes prescribed requirements, specified by a state or other jurisdiction, for high school/secondary school graduation in a vocational program -- together with other required subject matter, and that may prepare individuals for specific occupations or direct labor market entry.

53.0104 **Honors/Regents High School Diploma *and Provincial Graduation Certificate.*** An instructional program that describes prescribed requirements, specified by a state, province, or other jurisdiction for high school/secondary school graduation in an academic or vocational program at a prescribed level of outstanding scholastic performance, or via meeting special requirements beyond the minimum.

53.0199 **High School/Secondary Diplomas, Other.** Any high school/secondary diploma program not described above, such as diplomas awarded to special education students for completion of an individualized education plan (IEP).

53.02 **High School/Secondary Certificates**. A group of instructional programs that describe the requirements for successful completion of specified portions of high school/secondary diploma programs.

53.0201 **High School Equivalence Certificate *and Adult Secondary School Diploma***. An instructional program that describes the requirements for meeting the minimum high school/secondary completion requirements specified by a U.S. state or other jurisdiction, or a Canadian province or territory, for adult learners who did not complete secondary school. Includes undertaking a specified program of studies and obtaining a prescribed passing score on the General Educational Development Test (GED) or provincial examinations. These awards represent the legally recognized equivalent of secondary school graduation.

53.0202 **High School Certificate of Competence *and Provincial Certificate of Education.*** An instructional program that describes the content requirements for meeting specified performance standards in various secondary school studies that does not represent completion of and graduation from secondary school, as prescribed by a U.S. state or other jurisdiction, or a Canadian province or territory. Includes such requirements as passing a state- or province-mandated academic achievement test and completing other specified requirements for subject-matter competence. These awards may be given for partial completion of secondary school or for achieving a specified high level of concentration and/or performance in certain subjects, and may be awarded independently or in conjunction with a high school/secondary diploma.

53.0203 **Certificate of IEP Completion**. An instructional program that describes the requirements for meeting specified goals pertaining to an Individual Educational Program established by a local school system under the authority of a state or other jurisdiction. Specific content varies by student and may or may not equal a regular high school/secondary school program.

53.0299 **High School/Secondary Certificates, Other**. Any certificate program at the high school/secondary instructional level not described above.

APPENDICES

Appendix A

FRENCH (CANADIAN) LANGUAGE AND LITERATURE/LETTERS

LANGUE et LITTÉRATURES FRANÇAISES/LETTRES

Appendix A

FRENCH (CANADIAN) LANGUAGE AND LITERATURE/LETTERS

LANGUE et LITTÉRATURES FRANÇAISES/LETTRES

Note: The codes in Series 54. are for the exclusive use of Statistics Canada in collecting datá on Canadian programs in French that correspond to English programs such as are listed under Series 23 for native speakers of the language. French is one of two national languages in Canada.. The use of Series 54. codes in the United States is inappropriate. Programs in the study of French as a foreign language or to learn to teach it in school settings should be reported under Series 13. or 16. as appropriate.

54. **LANGUE et LITTÉRATURES FRANÇAISES/LETTRES.** Un ensemble de groupes de programmes d'enseignement qui décrivent la structure et l'utilisation du français et des dialectes connexes, des discours, de la rédaction et les divers aspects de la littératures et la cultures des différents peuples de langue française en Canada et le monde.

------ **LANGUES et LITTÉRATURES ÉTRANGÈRE.** (voir la série 16.)

54.01 **Langue et littérature française, général.** Un groupe de programmes (voir le côde 54.0101).

------ **Art dramatique/Théâtre et Arts de techniques du théâtre.** (voir la série 50.05)

54.0101 **Langue et littérature française, général**. Un programme d'enseignement qui décrit, de façon générale, la langue française, y compris son histoire, sa structure et les compétences en communications; ainsi que la littérature et la culture des peuples de langue française.

------ **Enseignement/Instituteur/Professeur de la française**. (voir le côde 13.1325)

------ **Art dramatique/Théâtre, Général**. (voir le côde 50.0501)

54.02 **Littérature comparative**. Un groupe de programmes (voir le côde 54.0201)

54.0201 **Littérature comparative**. Un programme d'enseignement qui décrit l'étude et la comparaison des littératures des différentes sociétés et groupes linguistiques; y compris l'analyse des facteurs d'influence interculturels, des styles littéraires natinaux, de l'impact des traductions ainsi que le partage de l'heritage littéraire internationale. Comprend des instructions sur l'étude de littératures dans la langue originale de même que sur la traduction du français.

54.03 **Composition française.** Un groupe de programmes (voir le côde 54.0301).

54.0301 **Composition française**. Un programme d'enseignement qui décrit les principes du vocabulaire, de la grammaire, de la morphologie, de la syntaxe et des aspects sémantiques de la langue française; ainsi que les techniques utilisées pour la sélection, le développement, l'arrangement, la combinaison et l'expression d'idées sous formes écrites appropriées.

54.04 **Écriture créative en française**. Un groupe de programmes (voir le côde 54.0401).

54.0401 **Écriture créative en française.** Un programme d'enseignement qui décrit le processus et les techniques de composition originale sous diverses formes littéraires telles que la nouvelle, la poésie, le roman et autres. Comprend des cours portant sur les techniques de rédaction ou de révision, de critique littéraire, et de commercialisation de manuscrits terminés.

54.05 **Littérature Canadienne française.** Un groupe de programmes (voir le côde 54.0501).

54.0501 **Littérature Canadienne française.** Un programme d'enseignement qui décrit l'étude de la littérature et du développement littéraire formel et folklorique des Canadiens français, de la période coloniale jusqu'à présent. Comprend des cours portant sur l'étude de périodes précises ou des styles, d'auteurs, de la critique littéraire et des traditions régionales ou de la langue orale.

54.06 **Littérature françaises (France et la Communauté français).** Un groupe de programmes (voir le côde 54.0601).

54.0601 **Littérature françaises (France et la Communauté française).** Un programme d'enseignement qui décrit l'étude de la littérature et du développement littéraire formel et folklorique de France et les autres nations de la Communauté française, de les origins de la langue jusq'à présent. Comprend des cours portant sur l'étude de périodes précises ou des styles, d'auteurs, de la critique littéraire et des traditions régionales et des dialects ou de la langue orale.

54.07 **Discours et rhétorique.** Un ensemble de groupes de programmes (voir le côde 54.0701)..

54.0701 **Discours et rhétorique.** Un programme d'enseignement qui décrit l'étude de la communication humaine interpersonnelle du point de vue scientifique, comportemental et humaniste. Comprend des cours portant sur la théorie et la physiologie du discours, l'histoire du discours, la structure et l'analyse de l'argument et des genres de discours publiques, le rôle sociétal du discours, l'inteprétation orale de la littérature, les interactions interpersonnelles ainsi que la relation entre le discours, la communication non verbale et les autres formes d'éxchange de messages.

54.08 **Rédaction technique et commercielle en français.** Un ensemble de groupes de programmes (voir le côde 54.0801).

54.0801 **Rédaction technique et commercielle en français.** Un programme d'enseignement qui décrit la théorie, les méthodes et les competences nécessaires à la rédaction et la révision de documents scientifiques, techniques, et commerciaux ainsi que des monographies.

------ **Journalisme et Média communication.** (voir la série 09.04)

------ **Publicité.** (voir le côde 09.0201)

------ **Relations publiques et communications organisationnelles.** (voir le côde 09.0501)

54.99 **Langue et Littérature Française, Autres.** Un ensemble de groupes de programmes (voir le côde 54.9999).

54.9999 **Langue et Littérature Française, Autres.** Un programme d'enseignement qui décrit l'étude de la langue et littérature française qui ne sont pas classifiés ailleurs en la série 23.

Appendix B:
Program Codes and Titles Deleted in 2000, 1990 and 1985

Proposed CIP-2000 Deletions

CIP Codes and Titles Deleted in 1990
In Numerical Sequence

CIP Codes and Titles Deleted in 1985,
In Numerical Sequence

-- Appendix B --
Proposed CIP-2000 Deletions

1990 CIP Code Number	Instructional Program Title
Chapter I	*Academic and Occupationally Specific-Programs*
03.0203	Natural Resources Law Enforcement and Protective Services
03.0405	Logging/Timber Harvesting
05.0105	Eastern European Area Studies
05.0109	Pacific Area Studies
05.0112	South Asian Studies
05.0113	Southeast Asian Studies
05.0114	Western European Studies
05.0206	Asian-American Studies
08.02	Business and Personal Services Marketing Operations
08.0204	Business Services Marketing Operations
08.0205	Personal Services Marketing Operations
08.0299	Business and Personal Services Marketing Operations, Other
08.04	Financial Services Marketing Operations
08.0401	Financial Services Marketing Operations
08.0701	Auctioneering
08.0709	General Distribution Operations
08.08	Home and Office Products Marketing Operations
08.0809	Home Products Marketing Operations
08.0810	Office Products Marketing
08.0899	Home and Products Operations, Other
08.0903	Recreation Products/Services Marketing Operations
08.0906	Food Sales Operations
08.1208	Vehicle Marketing Operations
08.1209	Petroleum Products Retailing Operations
08.13	Health Products and Services Marketing Operations
08.1301	Health Products and Services Marketing Operations
10.0101	Educational/Instructional Media Technology/Technician
13.0402	Administration of Special Education
13.0407	Community and Junior College Administration

-- Appendix B --
Proposed CIP-2000 Deletions - Continued

1990 CIP Code Number	Instructional Program Title
14.0802	Geotechnical Engineering
14.0803	Structural Engineering
14.16	Geophysical Engineering
14.1601	Geophysical Engineering
14.29	Engineering Design
14.2901	Engineering Design
15.0505	Solar Technology/Technician
16.06	Greek Language and Literature(Modern)
16.0602	Greek Language and Literature (Modern)
16.07	South Asian Languages and Literatures
16.0703	South Asian Languages and Literatures
19.02	*Family and Consumer Sciences Business Services*/Home Economics Business Services
19.0201	Business Family and Consumer Sciences/Business Home Economics
19.0202	*Family and Consumer Sciences Communications*/Home Economics Communications
20.0309	Drycleaner and Launderer (Commercial)
20.0502	Window Treatment Maker and Installer
20.0599	Home Furnishings and Equipment Installers and Consultants
26.0499	Cell and Molecular Biology, Other
31.0506	Socio-Psychological Sports Studies
40.0701	Metallurgy
48.0205	Mechanical Typesetter and Composer
50.0505	Drama/Theatre Literature, History and Criticism
51.0804	Ophthalmic Medical Assistant
51.1803	Ophthalmic Medical Technologist

-- Appendix B --

CIP Codes and Titles Deleted in 1990 In Numerical Sequence

1985 CIP Code Number	Instructional Program Title
01.0202	Agricultural Electrification, Power, and Controls
01.0203	Agricultural Mechanics, Construction and Maintenance Skills
01.0205	Agricultural Structures, Equipment, and Facilities
01.0206	Soil and Water Mechanical Practices
01.0305	Game Farm Management
01.0402	Food Products
01.0499	Agricultural Products and Processing, Other
01.0502	Agricultural Services
01.0503	Agricultural Supplies Marketing
01.0504	Pet Grooming
01.0506	Horseshoeing
01.0602	Arboriculture
02.0208	Livestock
03.0202	Conservation
03.0402	Forest Production
03.0403	Forest Products Utilization
03.0504	Forest Engineering
04.01	Architecture and Environmental Design, General
04.0101	Architecture and Environmental Design, General
04.08	Land Use Management and Reclamation
04.0801	Land Use Management and Reclamation
06.	Business and Management
06.01	Business and Management, General
06.0101	Business and Management, General
06.0301	Banking and Finance
06.0403	Product Management
06.06	Human Resources Development
06.0601	Human Resources Development

-- Appendix B --
CIP Codes and Titles Deleted in 1990 In Numerical Sequence – Continued

1985 CIP Code Number	Instructional Program Title
06.0701	Hotel/Motel Management
06.0702	Recreational Enterprises Management
06.0703	Resort Management
06.0704	Restaurant Management
06.0705	Transportation Management
06.08	Insurance and Risk Management
06.10	Investments and Securities
06.11	Labor/industrial Relations
06.15	Organizational Behavior
06.16	Personnel Management
06.1601	Personnel Management
06.20	Trade and Industrial Supervision and Management
06.2001	Trade and Industrial Supervision and Management
06.21	Computer Installation Management
06.2101	Computer Installation Management
06.99	Business and Management, Other
07.	Business (Administrative Support)
07.01	Accounting, Bookkeeping and Related Programs
07.0101	Accounting, Bookkeeping, and Related Programs, General
07.0102	Accounting and Computing
07.0103	Bookkeeping
07.0104	Machine Billing, Bookkeeping, and Computing
07.0199	Accounting, Bookkeeping, and Related Programs, Other
07.02	Banking and Related Financial Programs, General
07.0203	Insurance Clerk
07.0205	Teller
07.0301	Business Data Processing and Related Programs, General
07.0302	Business Computer and Console Operation
07.0303	Business Data Entry Equipment Operation
07.0304	Business Data Peripheral Equipment Operation
07.04	Office Supervision and Management

-- Appendix B --

CIP Codes and Titles Deleted in 1990 In Numerical Sequence - Continued

1985 CIP Code Number	Instructional Program Title
07.05	Personnel and Training Programs
07.0501	Personnel and Training Programs, General
07.0502	Training Assisting
07.0503	Personnel Assisting
07.0599	Personnel and Training Programs, Other
07.0601	Secretarial and Related Programs, General
07.0606	Secretarial
07.0607	Stenographic
07.0699	Secretarial and Related Programs, Other
07.0701	Typing, General Office and Related Programs, General
07.0702	Clerk-Typist
07.0703	Correspondence Clerk
07.0704	Duplicating Machine Operation
07.0705	General Office Clerk
07.0708	Shipping, Receiving and Stock Clerk
07.0709	Traffic Rate and Transportation Clerk
07.0799	Typing, General Office and Related Programs, Other
07.08	Word Processing
07.0801	Word Processing
07.99	Business (Administrative Support), Other
08.0104	Footwear Marketing
08.0105	Jewelry Marketing
08.0201	Business and Personal Services Marketing
08.0202	Display
08.0203	Marketing of Business or Personal Services
08.05	Floristry, Farm and Garden Supplies Marketing
08.0501	Floristry, Farm and Garden Supplies Marketing, General
08.0502	Farm and Garden Supplies Marketing
08.0599	Floristry, Farm and Garden Supplies Marketing, Other
08.0602	Convenience Store Marketing
08.0603	Specialty Foods Marketing
08.0604	Supermarket Marketing
08.0605	Wholesale Food Marketing
08.0699	Food Marketing, Other

-- Appendix B --
CIP Codes and Titles Deleted in 1990 In Numerical Sequence - Continued

1985 CIP Code Number	Instructional Program Title
08.0702	Industrial Sales
08.0707	Wholesaling
08.0801	Home and Office Products Marketing, General
08.0802	Appliance Marketing
08.0803	Building Materials Marketing
08.0805	Furniture Marketing
08.0806	Hardware Marketing
08.0807	Office Products and Equipment Marketing
08.0808	Specialty Home Furnishings Marketing
08.0904	Recreation Products Marketing
08.1101	Transportation and Travel Marketing, General
08.1102	Transportation Marketing
08.1106	Warehouse Services Marketing
08.1201	Vehicles and Petroleum Marketing, General
08.1204	Petroleum Wholesaling
08.1205	Recreational Vehicles and Accessories Marketing
08.1206	Service Station Marketing
08.1207	Vehicle Rental and Leasing
09.03	Communications Research
09.0301	Communications Research
09.08	Telecommunications
09.0801	Telecommunications
10.0102	Motion Picture Technology
10.0105	Sound Recording Technology
10.0106	Video Technology
11.06	Microcomputer Applications
11.0601	Microcomputer Applications
12.01	Drycleaning and Laundering Services
13.0202	Bilingual Education Assisting
13.0299	Bilingual/Crosscultural Education, Other

-- Appendix B --
CIP Codes and Titles Deleted in 1990 In Numerical Sequence - Continued

1985 CIP Code Number	Instructional Program Title
13.0605	Elementary and Secondary Research
13.0606	Higher Education Research
13.1002	Education of the Culturally Disadvantaged
13.1010	Remedial Education
13.1313	Nutritional Education
14.1002	Microelectronic Engineering
14.26	Surveying and Mapping Science
15.0102	Architectural Interior Design Technology
15.0199	Architectural Technologies, Other
15.0202	Drafting and Design Technology/Technician
15.0204	Urban Planning Technology
15.0299	Civil Technologies, Other
15.0302	Electrical Technology
15.0502	Air Pollution Control Technology
15.0504	Sanitation Technology
15.0602	Food Processing Technology
15.0606	Optical Technology
15.0609	Textile Technology
15.0610	Welding Technology
15.0804	Marine Propulsion Technology
15.0902	Mining (excluding coal) Technology
16.02	African (Non-Semitic) Languages
16.0201	African (Non-Semitic) Languages
16.10	Native American Languages
16.1001	Native American Languages
17.0202	Dialysis Technology
17.0205	Emergency Medical Technology - Ambulance
17.0206	Emergency Medical Technology - Paramedic

-- Appendix B --
CIP Codes and Titles Deleted in 1990 In Numerical Sequence - Continued

1985 CIP Code Number	Instructional Program Title
17.0302	Chemistry Technology
17.0303	Clinical Animal Technology
17.0304	Clinical Laboratory Aide
17.0305	Clinical Laboratory Assisting
17.0308	Histologic Technology
17.0311	Microbiology Technology
17.04	Mental Health/Human Services
17.0405	Mental Health/Human Services Assisting
17.0406	Mental Health/Human Services Technology
17.0408	Therapeutic Child Care Work
17.0409	Population and Family Planning
17.05	Miscellaneous Allied Health Services
17.0502	Central Supply Technology
17.0510	Podiatric Assisting
17.0514	Chiropractic Assisting
17.06	Nursing-Related Services
17.0601	Geriatric Aide
17.0701	Ophthalmic Dispensing
17.0705	Optometric Technology
17.802	Corrective Therapy
17.0809	Occupational Therapy Aide
17.0812	Orthopedic Assisting
17.0814	Physical Therapy Aide
17.0816	Recreational Therapy Assisting
17.0819	Respiratory Therapy Assisting
17.0820	Speech/Hearing Therapy Aide
17.0822	Recreational Therapy Aide
17.99	Allied Health, Other
18.0404	Oral/Maxial Facial Surgery
18.0701	Health Services Administration
18.0702	Health Care Planning
18.09	Medical Laboratory

-- Appendix B --
CIP Codes and Titles Deleted in 1990 In Numerical Sequence - Continued

1985 CIP Code Number	Instructional Program Title
18.17	Pre-Dentistry
18.18	Pre-Medicine
18.19	Pre-Pharmacy
18.20	Pre-Veterinary
18.2201	Public Health Laboratory Science
18.2204	Public Health Practice and Management
19.0602	Household Equipment
19.0904	Textile Science
19.0999	Textiles, Apparel and Clothing Studies, Other
20.0204	Foster Care/Family Care
20.0302	Clothing Maintenance Aide
20.0304	Custom Apparel/Garment Seamstress
20.0308	Wedding/Specialty Consulting
20.0406	Food Service
20.0408	School Food Service
20.0503	Custom Slipcovering and Upholstering
20.0504	Floral Design
20.0505	Home Decorating
20.0506	Home Furnishings Aide
20.0507	Home-Service Assisting
20.0603	Consumer Aide/Assisting
21.0102	Construction
21.0103	Drafting and Design
21.0104	Electricity/Electronics;
21.0105	Energy, Power, and Transportation
21.0106	Graphic Arts
21.0107	Manufacturing/Materials Processing
21.0199	Industrial Arts, Other
23.02	Classics
23.06	Linguistics (includes Phonetics, Semantics and Philology)

-- Appendix B --
CIP Codes and Titles Deleted in 1990 In Numerical Sequence - Continued

1985 CIP Code Number	Instructional Program Title
23.12	English as a Second Language
23.1201	English as a Second Language
25.02	Archival Science
25.0201	Archival Science
26.0201	Biochemistry and Biophysics
26.0602	Biometrics and Biostatistics
26.0604	Embryology
26.0605	Endocrinology
26.0606	Histology
26.0703	Genetics, Human and Animal
27.02	Actuarial Sciences
27.04	Pure Mathematics
27.0401	Pure Mathematics
29.99	Military Technologies, Other
29.9999	Military Technologies, Other
30.02	Clinical Pastoral Care
30.0201	Clinical Pastoral Care
30.03	Engineering and Other Disciplines
30.0301	Engineering and Other Disciplines
30.04	Humanities and Social Sciences
30.0401	Humanities and Social Sciences
30.09	Imaging Science
30.0901	Imaging Science
31.02	Outdoor Recreation
31.0201	Outdoor Recreation
31.04	Water Resources
31.0401	Water Resources

-- Appendix B --
CIP Codes and Titles Deleted in 1990 In Numerical Sequence - Continued

1985 CIP Code Number	Instructional Program Title
32.0102	Academic and Intellectual Skills
32.0103	Communications Skills
32.0106	Motor Skills
34.0101	Health-Related Activities, General
35.0104	Social Role Engineering
36.0104	Hobbies
37.0105	Values, Attitudes, and Beliefs
40.09	Planetary Science
40.0901	Planetary Science
41.0102	Oceanographic (Biological) Technology
41.0199	Biological Technologies, Other
41.0201	Nuclear Materials Handling Technology
41.0202	Nuclear Powerplant Operation Technology
41.0203	Nuclear Powerplant Radiation Control Technology
41.0302	Geological Technology/Technician
41.0304	Meteorological Technology
41.0305	Oceanographic (Physical) Technology
42.05	Comparative Psychology
42.0501	Comparative Psychology
42.10	Personality Psychology
42.1001	Personality Psychology
42.12	Psycholinguistics
42.1201	Psychofinguistics
42.13	Psychometrics
42.1301	Psychometrics
42.14	Psychopharmacology
42.1401	Psychopharmacology

-- Appendix B --
CIP Codes and Titles Deleted in 1990 In Numerical Sequence - Continued

1985 CIP Code Number	Instructional Program Title
42.15	Quantitative Psychology
42.1501	Quantitative Psychology
43.0101	Correctional Administration
43.0105	Criminal Justice Technology
43.0108	Law Enforcement Administration
44.01	Public Affairs, General
44.0101	Public Affairs, General
44.03	International Public Service
44.0301	International Public Service
44.06	Public Works
44.0601	Public Sanitation
44.0602	Public Transportation
44.0603	Public Utilities
44.0699	Public Works, Other
44.0799	Social Work, Other
45.0302	Archaeological Technology
46.0102	Brickmasonry, Block and Stonemasonry
46.0103	Tile Setting
46.0199	Brickmasonry, Stonemasonry and Tile Setting, Other
46.0402	Concrete Placing and Finishing
46.0404	Drywall Installation
46.0405	Floor Covering installation
46.0406	Glazing
46.0407	Insulation Installation
46.0409	Plastering
46.0410	Roofing
46.0502	Pipefitting and Stearnfitting
46.0503	Plumbing
46.0599	Plumbing, Pipefitting and Stearnfitting, Other
47.0107	Motor Repair
47.0108	Small Appliance Repair
47.0109	Vending and Recreational Machine Repair

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CIP Codes and Titles Deleted in 1990 In Numerical Sequence - Continued

1985 CIP Code Number	Instructional Program Title
47.0202	Cooling and Refrigeration
47.0203	Heating and Air Conditioning
47.0299	Heating, Air Conditioning, and Refrigeration Mechanics, Other
47.0301	Industrial Equipment Maintenance and Repair, General
47.0304	Mine Equipment Maintenance and Repair
47.0305	Oil and Gas Drilling Equipment Operation and Maintenance
47.0405	Operation, Maintenance, and Repair of Audio-Visual Equipment
47.0407	Sporting Goods Equipment Repair
47.0502	Conventional (Non-Nuclear) Electrical Power Generation
47.0504	Pumping Plants
47.0599	Stationary Energy Sources, Other
47.0601	Vehicle and Mobile Equipment Mechanics and Repairers, General
48.0202	Bookbinding
48.0207	Photographic Laboratory and Darkroom
48.0209	Silk Screen Making and Printing
48.0210	Photoengraving
48.0301	Leatherworking and Upholstery, General
48.0302	Saddlemaking and Repair
48.04	Precision Food Production
48.0401	Precision Food Production, General
48.0403	Slaughtering and Butchering
48.0499	Precision Food Production, Other
48.0502	Foundry Work
48.0504	Metal Fabrication
48.0505	Metal Patternmaking
48.06	Precision Work, Assorted Materials
48.0601	Industrial Ceramics Manufacturing
48.0602	Jewelry Design, Fabrication, and Repair
48.0604	Plastics
48.0699	Precision Work, Assorted Materials, Other
49.0201	Vehicle and Equipment Operation, General
49.0203	Material Handling
49.0204	Mining Equipment Operation

-- Appendix B --
CIP Codes and Titles Deleted in 1990 In Numerical Sequence - Continued

1985 CIP Code Number	Instructional Program Title
49.0301	Water Transportation, General
49.0302	Barge and Boat Operations
49.0305	Marina Operations
49.0308	Sailors and Deckhands
50.0205	Glass
50.0299	Crafts, Other
50.0403	Illustration Design
50.0405	Theater Design
50.0603	Film Animation
50.0604	Holography
50.0606	Video
50.0702	Art Conservation

-- Appendix B --

CIP Codes and Titles Deleted in 1985, In Numerical Sequence

1981 CIP Code Number	Instructional Program Title
01.0403	Nonfood Products
02.0205	Animal Physiology
02.0207	Fisheries Science
02.0302	Dairy Processing
02.0303	Food Distribution
02.0304	Food Engineering
02.0305	Food Packaging
02.0306	Food Technology
02.0399	Food Sciences, Other
02.0404	Ornamental Horticulture
02.0405	Plant Breeding and Genetics
02.0406	Plant Pathology (Applied)
02.0407	Plant Physiology
02.0410	Turf Management Science
02.0502	Soil Chemistry
02.0503	Soil Conservation
02.0504	Soil Management and Fertility
02.0505	Soil Microbiology
02.0506	Soil Physics
02.0599	Soil Sciences, Other
03.0302	Fisheries
03.0399	Fishing and Fisheries. Other
03.0406	Pulp and Paper Production
03.0503	Forest Biology
03.0505	Forest Hydrology
03.0507	Forest Mensuration
03.0508	Urban Forestry
06.0404	System Efficiency Analysis
06.1301	Business Statistics

-- Appendix B --

CIP Codes and Titles Deleted in 1985, In Numerical Sequence – Continued

1981 CIP Code Number	Instructional Program Title
06.1702	Commercial Property
06.1703	Property Management
06.1704	Real Estate Appraisal
06.1705	Real Estate Finance
06.1706	Real Estate Law
06.1707	Residential Property
06.1799	Real Estate, Other
06.1802	Small Business Ownership
06.1899	Small Business Management and Ownership, Other
07.0202	Credit Collection Clerk
07.0204	Loan Clerk
07.0206	Transit Clerk
07.0710	Typing
08.0402	Banking Marketing
08.0403	Credit Marketing
08.0404	Credit Union Marketing
08.0405	Savings and Loan Marketing
08.0406	Securities and Commodities Marketing
08.0499	Financial Services Marketing, Other
08.0804	Floor Coverings, Draperies, and Upholstery Marketing
08.1002	Accident and Health Insurance Marketing
08.1003	Life Insurance Marketing
08.1004	Property and Casualty Insurance Marketing
08.1099	Insurance Marketing, Other
08.1103	Passenger Transportation Marketing
08.1202	Agricultural Implements and Machinery Marketing
12.0102	Drycleaning
12.0103	Laundering
12.0199	Drycleaning and Laundering Services, Other
12.0201	Entertainment Services, General
13.0602	Adult and Continuing Education Research

-- Appendix B --

CIP Codes and Titles Deleted in 1985, In Numerical Sequence - Continued

1981 CIP Code Number	Instructional Program Title
15.0601	Chemical Manufacturing Technology
15.0604	Manufacturing Technology
15.0605	Marine Products Technology
15.0608	Safety Technology
15.0802	Agricultural Equipment Technology
16.0303	Korean
16.0401	Baltic Languages
16.0503	Yiddish
16.0602	Greek (Modern)
16.0701	Hindi
16.0702	Sanskrit
16.0799	Indic Languages, Other
16.08	Iranian Languages
16.0801	Iranian Languages
17.0403	Genetic Counseling
17.0501	Animal Technology
17.0509	Physician Assisting- Specialty
17.0511	Veterinarian Aide
17.0603	Obstetrical Technology
17.0604	Pediatric Aide
17.0702	Ophthalmic Laboratory Technology
17.0703	Ophthalmic Medical Assisting
17.0704	Optometric Assisting
17.0706	Orthoptics
17.0805	Manual Arts Therapy
17.0810	Orthotic/Prosthetic Assisting
17.0821	Speech-Language Pathology/Audiology
18.05	Emergency/Disaster Science
18.0501	Emergency/Disaster Science

1981 CIP Code Number	Instructional Program Title
18.06	Epidemiology
18.08	Hematology
18.16	Population and Family Planning
18.21	Prosectorial Science
18.2101	Prosectorial Science
18.23	Toxicology (Clinical)
19.0302	Nonformal Education (Extension, Adult/Extended
19.0303	Family Services
19.0399	Family and Community Services, Other
19.0403	Family Economics
19.0504	Human Nutrition
19.0702	Adult Development
19.08	International/Comparative Home Economics
19.0801	International/Comparative Home Economics
19.0903	Textiles and Clothing, Retail
20.0205	Teacher Aide
20.0307	Textiles Testing
20.0407	Food Testing
20.0607	Therapeutic Recreation Aide
23.09	Rhetoric
23.0901	Rhetoric
26.0303	Mycology
26.0306	Plant Pharmacology
40.0803	Electron Physics
40.0804	Elementary Particle Physics
40.0805	Fluids and Plasmas

-- Appendix B --

CIP Codes and Titles Deleted in 1985, In Numerical Sequence – Continued

1981 CIP Code Number	Instructional Program Title
46.0411	Terrazzo Installation
47.0503	Industrial Nuclear Energy
47.0602	Aircraft Mechanics
48.0603	Optical Goods Work
49.0103	Aviation Computer Technology
49.0307	Merchant Marine Officers
50.0203	Enameling
50.0707	Kinetics
50.08	Graphic Arts Technology
50.0801	Graphic Arts Technology

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